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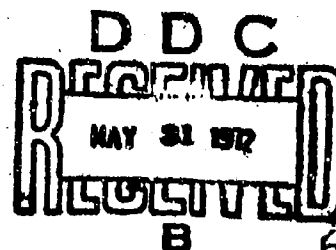
COMPUTER SYSTEM MANUAL
CSM PSM 9A-67
VOLUME III, PART B
29 FEBRUARY 1972

**THE NMCSSC
QUICK-REACTING
GENERAL WAR GAMING
SYSTEM
(QUICK)**

**SIMULATION OUTPUT
SUBSYSTEMS**

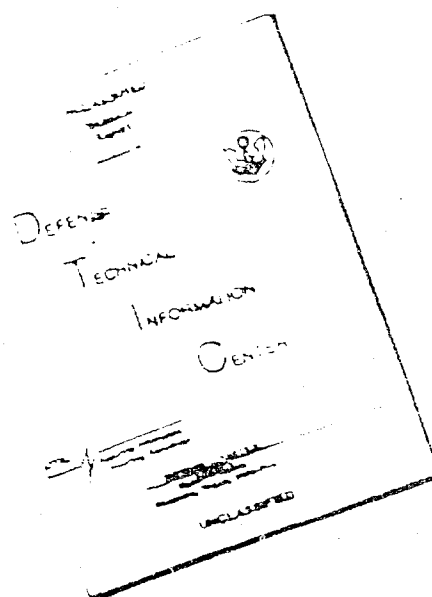
VOL III - P A
AD 742790
**PROGRAMMING SPECIFICATIONS
MANUAL**

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16. ABSTRACT This is one of three volumes describing computer programs of the QUICK-Reacting General War Gaming System (QUICK). These volumes complement other NMCSSC Computer System Manuals on QUICK by discussing the programs from a computer programming point of view. This volume, in two parts, concentrates on the Simulation (Output) Subsystem of QUICK. Other volumes are available for the Input Subsystem and Plan Generation Subsystem. Collectively, these manuals provide a basis for maintenance activity on the QUICK System. Based upon a suitable data base, and user control parameters, QUICK will generate individual bomber and missile plans suitable for war gaming. The generated plans are of a form suitable for independent review and revision. Subsequently, execution of the planned events can be simulated. Various statistical summaries can be produced to reflect the results of the war game. A variety of force postures and strategies can be accommodated. QUICK is documented extensively in a set of Computer System Manuals (series 9-67) published by the National Military Command System Support Center (NMCSSC), Defense Communications Agency (DCA), The Pentagon, Washington, DC 20301.		

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Computer System Manual Number CSM PSM 9A-67

29 February 1972

THE NMCSSC QUICK-REACTING GENERAL WAR GAMING SYSTEM (QUICK)

Programming Specifications Manual

Volume III - Simulation (Output) Subsystems

Part B

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ABSTRACT

The computerized Quick-Reacting General War Gaming System (QUICK) will accept input data, automatically generate global strategic nuclear war plans, simulate the planned events, and provide statistical output summaries. QUICK has been programmed in FORTRAN for use on the NMCSSC CDC 3800 computer system.

The QUICK Programming Specifications Manual (PSM) consists of three volumes: Volume I, Data Input Subsystem; Volume II, Plan Generation Subsystem; Volume III, Simulation and Data Output Subsystems. The Programming Specifications Manual complements the other QUICK Computer System Manuals to facilitate maintenance of the war gaming system. This volume, Volume III, provides the programmer/analyst with a technical description of the purpose, functions, general procedures, and programming techniques applicable to the programs of the Simulation and Data Output subsystems. This volume consists of two parts: Part A provides a description of the programs/subroutines which make up the two subsystems; Part B contains the associated program listings. Companion documents are:

1. GENERAL DESCRIPTION
Computer System Manual CSM GD 9A-67
A nontechnical description for senior management personnel
2. ANALYTICAL MANUAL
Computer System Manual CSM AM 9A-67 (three volumes)
Provides a description of the system methodology for the nonprogrammer analysts
3. USER'S MANUAL
Computer System Manual CSM UM 9-67
Provides detailed instructions for applications of the system
4. OPERATOR'S MANUAL
Computer System Manual CSM OM 9A-67
Provides instructions and procedures for the computer operators

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```

PROGRAM SIMULATE
CSEURR
C  SIMULATE 25SEPT71 *****
C  INITIALIZES OR CALLS FOR INITIALIZATION OF ARRAYS, READS IN BASIC
C  DATA, PRINTS EVENT DATA AND PLANTS INITIAL EVENT FOR EACH VEHICLE,
C  PLANTS THE FIRST ZONE STATUS EVENT, PLANTS ENDGAME, AND CALLS
C  ORCHEST TO START THE SIMULATION
C  THE FOLLOWING TAPES ARE ASSIGNED--
C  1 - 4 EVENT SPILL
C  5 HISTORY OUTPUT
C  6 EVENT LIST FROM PLAN GENERATOR
C  7 LIBRARY DATA
C *****
CUSE
C  AGZSUM 25SEP71 *****
COMMON/AGZSUM/AGZ(12*100),TYD(12*100)
CEND
C  AGZSUM *****
C  NAGZ = NUMBER OF WARHEADS FOR TYPE OF WEAPON(DELIVERED)
C  TYD = NUMBER OF MEGATONS FOR TYPE OF WEAPON(DELIVERED)
C *****
C  COMMON/AMEDAT/AMT(12*3),ALM(12*),LOVERLAP(12*),ANAD
C  AMT = NUMBER OF AREA INTERSECTIONS
C  ALM = NUMBER OF LONG RANGE RADARS PER ZONE
C  LOVERLAP = PACKED DATA ARRAY
C  ANAD = ZONE INDEX NUMBER
C *****
CUSE
C  HCHER 25SEP71 *****
COMMON/HCHER/PLABT(100),TMDEL(100),ARRATE(100),PHABT(100),CEPH(100),
C  TLINT(100),IFUNC(100)
C *****
C  HCHER *****
C  PLABT = LAUNCH ABORT PROBABILITIES
C  TMDEL = DELAY TIMES AFTER LAUNCH ABORT
C  ARRATE = ABORT RATES
C  PHABT = REFUELING ABORT PROBABILITIES
C  CEPH = CIRCULAR ERRORS OF PROBABILITY
C  TLINT = TIMES BETWEEN SUCCESSIVE HCHER LAUNCHES
C  IFUNC = HCHER FUNCTION
C *****
CUSE
C  HRRNT 25SEP71 *****
COMMON/HRRNT/TYPECUM(15),NVALUEYP(15),INDEGCL(15),INDEGITY(250),
C  HRRPAT *****
C  TYPECUM = CUMULATIVE NUMBER OF TYPES THROUGH END OF A CLASS
C  NVALUEYP = NUMBER OF VALUE TYPES IN A CLASS
C  INDEGCL = BEGINNING INDEX OF A CLASS
C  INDEGITY = BEGINNING INDEX OF A TYPE
C *****
COMMON/DATA/ISIZE
DATA(ISIZE = 310)

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C
C
C
CUSE
*****
COMMON/EDATA/SIDE,IBASE,IMM,JNFM,NMTP,DGZ,DGZ,DGZ,DGZ,ITYPE,
1 ICLASS,IREG,IALENT,IZCNC,IMHIC,NULCO,ALIC,IMC,PCN,VCSPC(2),
2 IACT,JAIC(2),NALT,ITACT,ITING(80),INDPC(10),INIE(6),
3 IINTER(12),XGZC(12),YDZC(12),ZDZC(12),B(6),CUTDATA(32),SIDE,
4 ITRASH,INDV,IALAM,NMTP,DGZ,DGZ,DGZ,DGZ,ITYPE,ICLASS,IREG,IALENT,
5 IZCNC,IMHIC,NULCO,IAL,IMC,PKAV,SPAC(2),IM(J),EXTRA(2),NALT,
6 IACT,ITING(80),INUP(60),INDE(80),ISTY(12),XDZC(12),YDZC(12),
7 ZDZC(12),INDATA(32)
EQUIVALENCE (SIDE,CUTDATA(1)), (SIDE,INDATA(1))
EQUIVALENCE (IMPLAM,NALT), (IMH,IMH), (IMT,IMT)
TYPE INTEGER DEX,DGZ,DGZ,DGZ,DGZ,DGZ,DGZ,DGZ
TYPE INTEGER DEX,DGZ,DGZ,DGZ,DGZ,DGZ,DGZ,DGZ
TYPE INTEGER CUTDATA,SIDE,SIDE
CEND
*****
COMMON/EDATA/
EQUIVALENCE (NMPNS,INDATA(13)), (NTANG,INDATA(14))
1 (APML,IST,INDATA(15)), (LAUNLIST,INDATA(33))
2 (MLIST,INDATA(51)), (TMLAUN,INDATA(4))
TYPE INTEGER MPMLIST
DIMENSION MPMLIST(18),LAUNLIST(18),MLIST(27)
*****
C
C
C
COMMON/VENT/I,IDEV,INDF
INDEV = EVENT NUMBER
INDF = FORMAT NUMBER
*****
C
C
C
C
C
C
C
COMMON/FORMAT/JFORMAT(10)
DATA JFORMAT=1,1500228,160*168,25001*8,2501205,1000168)
*****
C
C
C
COMMON/PUTPRINT/IFUT
IFUT = OPTION FLAG FOR PRINTING FUTURE
*****
C
C
C
C
C
CUSE
FILABEL 28APR71
COMMON/FILABEL/INJENI,INRUNG,INDATE,
1 INFORM,INSECK,INTIME,INLNGTH,INCOM(15)
FILABEL
*****
DATA IDATE = 84 JUNE 71)
COMMON/HISTOUT/HISTOUT(200)
COMMON/PRINT/PRINT(60)
TYPE LOGICAL PRINT
COMMON/IPS4ICK/IPS4,IPS4*2,IPS4*3,IPS4*4,IPS4*5,IPS4*6

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DIMENSION ITAPES(10)
 DATA ITAPES = 1.0,3.4,7.8,9.10,0
 DATA (SIDE = 1), (SIDE = 1)

NOCELL = 7000

CALL P-GECKP

INITIALIZE ARRAYS

1 I=1,32

1 I=DATA(I)=OUTDATA(I)

UC 2 I=1, NOCELL

2 STATUS(I)=0

UC 3 I=1, NYCELL

3 COLAM(I)=0

UC 4 I=1,63

NPENZ(I) = 1

4 KILLZ(I) = 1

UC 5 I=1,160

NAGZ(I) = 0

5 TVD(I) = 0

UC 6 I=1,100

NFTANK(I) = NEFTANK(I) = 0

UC 7 I=1,200

7 NHISTO(I)=0

UC 8 I=1,1600

8 INECOV(I)=0

CALL FOR INITIALIZATION OF TAPE HANDLING PACKAGE

MYDENT = RMSIMULATE

ICPRINT = 1

CALL INITAPE

SET UP LIST OF TAPES AVAILABLE FOR SPILLING AND INITIALIZE ESICR

CALL INITEV(ITAPES)

CALL FOR INITIALIZATION OF LIST MEMORY

CALL INITLIST

CALL FOR MAKING OF PACKED ARRAY PACKING SPECIFICATION #ONDS

1 STAT = KEYMARE(2,0,1)

1 KEEP = KEYMARE(2,2,1)

1 COL = KEYMARE(2,3,1)

NAVDBL = KEYMARE(2,5,1)

TARDEFLO = KEYMARE(2,6,3)

TARDEFNI = KEYMARE(2,9,3)

TATTACK = KEYMARE(2,12,1)

TVULN = KEYMARE(2,15,6)

TAMEA = KEYMARE(2,21,1)

ITEMM = KEYMARE(2,24,9)

KDEFZON = KEYMARE(2,33,6)

KDEFCHP = KEYMARE(2,39,2)

ZONE = KEYMARE(2,42,6)

KEYTIN = KEYMARE(2,34,14)

KEYNTA = KEYMARE(2,22,12)

KEYVDA = KEYMARE(1,11,11)

KEYDY = KEYMARE(1,0,11)

KTAR = KEYMARE(2,0,15)

KZCN(1) = KEYMARE(2,15,6)

KZCN(2) = KEYMARE(2,21,6)

KZCN(3) = KEYMARE(2,27,6)

CALL HUCARDS

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1800.00
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1840.00
1850.00
1860.00
1870.00
1880.00
1890.00
1900.00
1910.00
1920.00
1930.00
1940.00
1950.00
1960.00
1970.00
1980.00
1990.00
2000.00
2010.00
2020.00
2030.00
2040.00
2050.00
2060.00
2070.00
2080.00
2090.00
2100.00
2110.00
2120.00

```

ICUTASIFUT
IFUT=0
CLAUNR = .04
SET ITP FOR LIBRARY TAPE AND CALL FOR HEAD IN OF THIS DATA
ITP=7
MYIDENT = 8H SIMTAPE
CALL READIN
CALL PAGESKP
CALL FOR HALLISTIC MISSILE STATUS SUMMARY
CALL HUSTAT
CALL PAGESKP
AND LISTOR, UNUSED PORTIONS OF STATUS AND COLOR TO LIST MEMORY
IMAX = MAXIND + 1
INDX=INCELL*IMAX
NMAX=INCELL*(IMAX+S)
CALL ADDRESS(INDX+NMAX*LINKM)
IMAX=INCELL+1
INDX=INCELL*INXCELL*IMAX
NMAX=INXCELL*(IMAX+S)
CALL ADDRESS(INDX+NMAX*LINKM)
SET CURRENT TAPE TO CURRENT EVENT TAPE
KPASS=1
19 ITP = 6
NPRINT=1
MYIDENT = RHEVENTAPE
CALL SETHEAD
NPRINT=1
MYIDENT = HMSCRAICH
IF (INFORM, EQ, JDATE) 20, 920
920 PRINT 9020, INFORM, JDATE
9020 FORMAT(//, 22H EVENT TAPE FORMAT IS .AB, 11H SHOULD BE .AB)
STOP
20 ITP = 6
HEAD I-DATA BLOCKS
CALL HUSCHD
LEV=IT*CHD
IF (IT*CHD .EQ. 0) 32, 21
21 CALL RUARWAY(1, 4HATA, LEV)
C TEST VEHICLE CLASS FOR PROPER PRINT AND PLANT SECTION
IF (INDATA(1) .EQ. SHNAVAL) 27, 22
NAVY OHL EVENT
27 FUTURE=DELAY(SIDE)*HMCUR
IF (IPS=0) 17, 14
17 PRINT 29, (INDATA(1), 1 = 1, LEV)
29 FORMAT(7H INDATA, 611, 42X, AB, 311, 2110)
14 CALL PLANTS(2, LEV)
GO TO 20
22 IJK = ICLASS + 1
GO TO (23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000)
GO TO 20
23 PRINT 9023, ICLASS
9023 FORMAT (/, 11 (2H *) 24H TERMINATED ON ICLASS = , 516 (10 (2H *) //)
CALL ARCHT
GO TO 32
24 FUTURE = DELAY(SIDE) * HMCUR
CALL RUARWAY(2, HPLIST, HPLANS)

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01/03/72

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CALL RDARRAY(LAUNLIST,NWPNS)
CALL RDARRAY(MLIST,NTARG)
LEV = 50 + NTARG
CALL PLANTS(1,LEV)
IF(IPS=1) 25+2J
25 CALL 45INPHIN
GO TO 26J
C CLASS 2 CONSISTS OF BOMBERS - PRINT INDATA AND PLANT LAUNCHES
26 TLINT=TLINT(I,TYPE)
C TRANSFER PKNAV TO NEW LOCATION
INDATA(18)=INDATA(6)
INDATA(6)=0
CALL RDARRAY(TINC,INT)
CALL RDARRAY(INDP,INT)
CALL RDARRAY(INDR,INT)
CALL RDARRAY(INDT,INT)
CALL RDARRAY(INDY,INT)
CALL RDARRAY(INDZ,INT)
CALL RDARRAY(INDW,INT)
CALL RDARRAY(INDV,INT)
GO TO 30J
C CLASS 3 CONSISTS OF TANKERS - PRINT INDATA AND PLANT LAUNCHES
28 TLINT=TLINT(I,TYPE)
CALL RDARRAY(TINC,INT)
CALL RDARRAY(INDP,INT)
CALL RDARRAY(INDR,INT)
CALL RDARRAY(INDT,INT)
CALL RDARRAY(INDY,INT)
CLAUH IS DELAY FOR COMPLETE LAUNCH OF BOMBER SEE THEO CLAUH
3. FTIME = TINC(1) + DELAY(SIDE) + TLINT*INDY + CLAUH + HQUR
TINC(2) = TINC(2) + CLAUH
IF(TINC(2) > LT. 0.1301,309
30J JF = 2
GO 302 I = 3+PLAN
TINC(1) = TINC(1) + TINC(IJE)
TINC(IJE) = 0.0
JF = JF + 1
IF(TINC(IJE) > LT. 0.1302,309
302 CONTINUE
309 CONTINUE
NALT=INT-NPLAN
INVERT HISTORY AND WEAPON TABLES
C
GO 35 I=1,INT
TINC(1)=TINC(1)+1
INDP(1)=INDP(1)+1
INDR(1)=INDR(1)+1
INDT(1)=INDT(1)+1
INDY(1)=INDY(1)+1
INDZ(1)=INDZ(1)+1
INDW(1)=INDW(1)+1
INDV(1)=INDV(1)+1
GO 30 J=1,JNT
INTP(1)=INTP(1)+1
XNGZC(J)=XNGZC(J)+1
YNGZC(J)=YNGZC(J)+1
ZNGZC(J)=ZNGZC(J)+1
GO 35 CONTINUE
35 CONTINUE
CALL PLANTS(2,20)
IF(ICLASS > EQ. 2 .AND. IPS=2 .EQ. 1) 31.4J
IF(ICLASS > EQ. 3 .AND. IPS=3 .EQ. 1) 31.2J
31 CALL 41INPHIN
GO TO 2
32 IS = SDEEC

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SATS SIMULATE

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

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ED 0

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IDENT SIMULATE

SIMULATE	IDENT	SIMULATE
AGZSUM	01531	01531
AREADAT	00700	00700
ACMREM	00145	00145
MARKPT	01080	01080
DATA	00447	00447
EDATA	00001	00001
ESTOR	01200	01200
EVENT	01746	01746
FORMAT	00002	00002
FUTPRINI	00012	00012
FILLABEL	00001	00001
HISTOUT	00014	00014
IPRINT	00310	00310
IPSWICH	00002	00002
ITP	00007	00007
KEYWORDS	00001	00001
KEYWORDS	00024	00024
MYIDENT	00004	00004
MYLABEL	00001	00001
NAMES	00010	00010
NCOL	00013	00013
NDPRINT	00002	00002
NDPRGOUT	00001	00001
PLANTS	00120	00120
READ	00004	00004
REGOV	03101	03101
REFUEL	00310	00310
TANKEN	00310	00310
TIME	00002	00002
TWORD	00001	00001
ZONES	00475	00475
19501	54731	54731

EXTERNAL SYMBOLS

QNDENTRY
THEND
QNDSTOPS
Q160410J
Q30000W
QNDPAUSE
QNDOLCT
PAGESKP
INITAPE
INITAV
INITLIST
KEYMAKE
HOCARD
READIN
HNDSTAT
ADDMEH
SETREAD
RNDCHD
HNDARAY

5.4TS SIMULATE

PLANTS
AGRT
MSINPHIN
BTINPHIN
TERMIAPE
SETWITE
PLANT
DOWEXT
STM.
CNSINGL.

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EU

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[illegible]

5.475 SIMULATE

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CU0013	IALENTC						
CU0517	IALT						
CU0017	IALTC						
CU0014	IAREA	00355					
CU0013	IATTACK	00343					
CU0001	IBASE						
CU0511	ICLASS	00634	00646	00646	01113	01120	01120
CU0011	ICLASSC						
PU1115	IF00001.						
PU1122	IF00002.						
CU0740	IFUNCT						
CU0000	IFUT	00454	00456	00457	01302		
PU1507	IFUTK	01301					
PU1510	IGTTC.	00636					
CU0524	IHT	00721	00724	00747	00752	01020	01025
		01036	01043			01020	01031
		01031					
CU0024	IMIC						
PU1511	IK	00636					
CU0020	IKEEP	00312					
PU1512	IMAX	00477					
PU1353	IN03006.	01134	00502	00513	00515	00516	
PU1354	IN03007.	01157	01403	01405	01417	01444	
PU1355	IN03011.	01223	01421	01433	01445		
PU1356	IN03012.	01236	01371	01421	01432	01446	
CU0501	INDASE						
CU0007	INCUM						
CU0500	INDATA	00176	00575	00576	00640	00711	00712
CU0007	INDATAP						00713
CU0002	INDATE						
CU0036	INDREGCL						
CU0055	INDREGTV						
CU0772	INDE	00724	00755	01047	01047		
CU0272	INDEC	01450					
CU0000	INDEY	01327	01330				
CU0001	INDF	01331					
CU0002	INDM						
CU0652	INDP	00721	00752	01042	01042		
CU0152	INDPC	01043					
CU0502	INDV	00760					
PU1513	INDX	00301					
PU1514	INDY	00316					
CU0003	INF-DM	00342	00551	00551	00551		
CU0000	INIDENT						
X00011	INITAGE	00272					
X00012	INITEV	00274					
X00013	INITLIST	00277					
CU0006	INLNTM						
CU0001	INRDYNG						
CU0004	INSECH						
CU0503	INTAM						
CU0005	INTFE						
CU0514	INTONE						
CU0014	INTOSC						

5.ATS	SIMULATE	01/03/72	ED	PAGE NO.	14
C00001	LINKM	00510	00525		
C00100	LSHIFT	00475	00475		
C00001	MAXIND				
C00473	MAXZONE				
C01707	MENTIME				
C00006	MERGSW				
C00524	MHT				
C00004	MISDEF				
C00000	MLFIA	00010			
C00562	MLIST	00472			
X00026	MSINPRIN	00703			
C00525	MVT				
C00003	MYCMM				
C00000	MYCMM	01310	01310		
C00000	MYIDENT	00267	00267		
C00000	MYIDENT	01310			
C00002	MYLNIGHT				
C00001	MYSECH				
C00074	NAFTA	00016	00237		
C00000	NAGZ	00236			
C00530	NALT	01021			
C00030	NALTS				
C00002	NAMCLS				
C00000	NAMESIDE	00016	01201		
C00021	NAMETYPE				
C00021	NAVDEL	00324			
C00000	NBCELL	00105	00166		
C00017	NBLUETYP				
C00520	NCM	00477	00500	00513	00514
C00020	NCMC				
C00000	NCCL	00511	00511		
C00515	NDHI				
C00015	NDHIC				
C00004	ND14DATA				
C00516	NDLG				
C00016	NDLCC				
C00001	NET	01255	01255		
C00144	NETANK	00246	00247		
C00005	NEXTVENT				
C00000	NFIANK	00247	00255		
C00000	NH1STCUT				
C00074	NMR				
P01525	NMAX	00504	00507		
C00440	NMGR	01001	01241		
C00000	NCPRINT	00270	00271		
C000275	NPNZ	00226	00227		
C00030	NPLA4	01016	01016		
P01526	NR	01132	01133		
C00260	NRES	01141	01141		
P01527	NRI	01134	01144		
C00515	NTARG	00672	00572		
C00000	NTYPECUM				
C00000	NWCRSCUT	00016			
C00003	NWCRDS				

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CU0514	MBPNS	00004	00667				
CU0504	MBTYP						
CU0004	MBTYP						
PO0016	MBCELL	00203	00503	00515			
PO0017	NYCELL	00214	00520				
CU0000	CUIDATA	00175	00176				
CU0507	CUIDATAP						
PU1357	POU0000U	01362					
PU1373	POU0020U	01375					
PO1405	POU0030U	01410					
PO1421	POU0040U	01424					
XU0010	PAGESKP	00167	00467	00473	01342		
CU0521	PRNAV						
CU0021	PRNAV						
CU0000	PLANT						
XU0032	PLANT	01340					
XU0024	PLANTS	00630	00676	01110	01321		
CU0360	PRAG1						
XU0004	Q100100	00757					
XU0005	Q300000	01171					
XU0007	Q800100	00700	00161				
XU0001	Q800100	00163					
XU0006	Q800100	00200					
XU0003	Q800100	00200	01347				
XU0035	Q800100	01151					
XU0023	Q800100	00745	00662	00670	00714	00722	00725
		00745	00750	01136	01142	00717	00730
						01146	00733
							00736
XU0015	Q800100	00452					
XU0022	Q800100	00452					
XU0016	Q800100	00452					
CU0000	SCALET	00465					
CU0001	SCALET						
XU0031	SETWITF	00534					
CU0500	STUE	01311					
CU0000	STUEC	00420	00601	00655	00762		
PU0160	SIMULATE	CU0501	01127				
CU0522	SPARE	00160					
CU0022	SPC						
CU0106	SSFIA	00416					
CU0531	STATUS	00206	00207				
XU0034	STH	00546	00610				
CU1207	SVUATAP						
CU1722	SVTIME						
CU0531	TACMT						
CU0031	TACMT						
CU0120	TABRATE						
CU1710	TAPETIME						
CU0003	TANDEFHI	00336					
CU0002	TANDEFLO	00331					
CU0036	TBFIA	00310					
CU0001	TCOL	00317					
XU0030	TEKNTAPE	01167	00626	00650	01215	01277	01336
XU0002	TEKNTAPE	00555					

5.ATS SIMULATE

SIMULATE											ED	J	PAGE NO.	16
C00000 TIME	00716	00747	00761	00761	00766	00767	00770	00771	J1002	J1002	01004			
C00532 TIME	01304	01005	01306	01011	01011	01035	01035							
C00032 TIME	01330	00744	00756											
P01530 TIME	00710	00707												
C00620 TIME	00707	00743												
C00170 TIME	00743	01324												
C00002 TIME	01324													
C00120 TIME	00057	00657												
C00503 TIME	01145	J1150	01242											
C00620 TIME	00204													
C00000 TIME	00215													
P00624 TIME	00011													
P01016 TIME	01000													
P01053 TIME	01326													
P01110 TIME	01356													
P01145 TIME	01153													
P01252 TIME	01222													
C00000 TIME	00305													
C00050 TIME	00750													
C00005 TIME	00240	00241	00213	00224	00234	00244	00253	00251	00615	00623	00777			
C00240 TIME	00173	00202	01205	01213	01235	01244	01360	01355	01366	01367	01371			
P01364 TIME	01372	01164	01373	01400	01401	01402	01404	01404						
PJ1377 TIME	01152	01150	01413	01414	01415	01417	01420	01434						
P01412 TIME	01221	01251	01422	01427	01430	01431	01434							
P01426 TIME	01131	01437	01440	01441	01447	01447								
P01436 TIME	00004													
C00514 TIME	00177													
P00175 TIME	00002													
P00206 TIME	00221													
P00217 TIME	00232													
P00226 TIME	00242													
P00236 TIME	00250													
P00246 TIME	00257													
P00255 TIME	00265													
P00263 TIME	00265													
P00617 TIME	01017	00625												
P01001 TIME	01017	01017												
P01031 TIME	01052													
P01061 TIME	01107													
P01154 TIME	01106	J1164												
P01160 TIME	01102													
P01206 TIME	01214													
P01223 TIME	01253	01253												
P01236 TIME	01245													
C01734 TIME	00732	01072	01072											
C01126 TIME	00173													
C00426 TIME	00735	J1077	01077											
C00026 TIME														
C01142 TIME														

5.ATS SIMULATE

C00442 Y09ZC
 C00176 ZCCPCT
 C00077 ZDEFPCT
 C01156 Z09Z
 C00456 Z09ZC
 C00006 ZONE
 00555 SYMCLS

01100

03740 01104 01104

01104

01105
 00401

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PAGE NO. 1

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SUMROUTINE AATTMT
  AATTMT 200070 *****
  C RECORDS KILL BY AREA ATTRITION *****
  CUSE EDATAB 4JAN71 *****
  COMMON/EOATA/SIDE,INBASE,INOM,JNTAN,NWTPC,DGKC,JUYC,DMCHC,ITPC,
  1ICLASS,INEGC,IALERTC,INZCNG,NHIC,NULCC,IALTC,NMCC,PKNAV,SPC(12),
  2IATC,JWTC,XX(2),NALT,IALTC,IALERTC,INCP(80),INDP(80),INDE(80),
  3ITWPC(12),ADGZ(12),YUGZ(12),ZUGZ(12),D(6),CUTDATA(320),SIDE,
  4INBASE,INOM,JNTAN,NWTPC,DGKC,JUYC,DMCHC,ITPC,ICLASS,INEGC,IALERT,
  5INZCNG,NHIC,NULCC,IALTC,NMCC,PKNAV,SPARE(21),IAT,JAT,EXTRA(2),NALT,
  6IALERT,INCP(80),INDP(80),INDE(80),IATYP(12),ADGZ(12),YUGZ(12),
  7ZUGZ(12),CUTDATA(320)
  EQUIVALENCE (SIDE,CUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (NPLAN,NALT), (NMT,INI), (NMT,JMT)
  TYPE INTEGER DGX,DGY,DMCH,ADGZ,YUGZ,ZUGZ
  TYPE INTEGER DGKC,JUYC,DMCHC,ADGZC,YUGZC,ZUGZC
  TYPE INTEGER CUTDATA,SIDE,SIDEC
  CEND EDATAB *****
  COMMON/ZONES/AREA(63),ZDEFPCT(63),ZCUPCT(63),NPEVZ(63),KILLZ(63),
  1 MAXZONE(2)

1 CONTINUE
C RECORD CALL TO AATTMT
CALL HIST(7,1)
C RECORD NUMBER KILL BY AREA DEFENSES
CALL HIST(7,2)
C DECREASE NUMBER OF PENETRATIONS IN CURRENT ZONE
7 NPEVZ(INZONE)=NPEVZ(INZONE) - 1 - NMT - NULC
C INCREASE NUMBER KILLED IN CURRENT ZONE
KILLZ(INZONE) = KILLZ(INZONE) + 1
END

```

5.4TS AATTHT

PROGRAM LENGTH AATTHT
ENTRY POINTS
BLOCK NAMES
EDATA
ZONES
EXTERNAL SYMBOLS
-ADDT.
-IST

AATTHT

IDENT

00031
00003
01200
00475

5-15 ATTRIT

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EU

PAGE NO.

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PU0013	AAITRT	00003	
CU0000	AREA		
CU0472	h		
PU0024	REGIV.	00024	
CU0505	UGA		
CU0005	UGAC		
CU0506	UGT		
CU0006	UGTC		
CU0507	UMCH		
CU0007	UMCHC		
PU0001	UICL	00005	00013
PU0025	ENDING.	00006	00023
PU0000	EXIT.	00025	
CU0526	EXTRA		
XU0002	MIST	00007	00012
CU0513	IALERT		
CU0013	IALERTC		
CU0517	IALT		
CU0017	IALTC		
CU0001	IBASE		
CU0511	ICLASS		
CU0011	ICLASSC		
CU0524	IMT		
CU0024	IMTC		
CU0501	IMHASE		
CU0503	INDATA		
CU0772	INDU		
CU0272	INDUC		
CU0002	INDM		
CU0652	INDP		
CU0152	INDPO		
CU0502	INDV		
PU0024	INITIAL.	00008	
CU0503	INITAH		
CU0514	INZONE	00015	00015
CU0014	INZONG		
CU0512	IREG		
CU0012	IREG		
CU0510	ITYPE		
CU0010	ITYPE		
CU0112	ITYP		
CU0412	ITYPE		
PU0007	.1		
PU0015	.7		
CU0003	JNTAH		
CU0525	JNT		
CU0025	JWTC		
CU0374	KILLZ		
CU0473	MAXZONE	00022	00023
CU0524	MHT		
CU0525	MWT		
CU0530	NALT		
CU0031	NALTC		
CU0520	NCH		

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CU0020	PCAC			
CU0515	NDMI	00017	00020	
CU0515	NDMIC	00020		
CU0516	NDLC			
CU0016	NDLCC			
CU0275	NPENZ	00016	00021	00021
CU0530	NPLAN			
CU0504	NWTP			
CU0004	NWTPC			
CU0000	CUFDATA			
CU0521	PKNAV			
CU0021	PKNAV			
X00001	UBDICT.	00000	00004	
CU0500	SLUE			
CU0000	SLUEC			
CU0522	SPARE			
CU0022	SPC			
CU0531	TACRT			
CU0031	TACRTC			
CU0532	TINC			
CU0032	TINCC			
CU1126	XDgZ			
CU0426	XDgZC			
CU0024	XX			
CU1142	YDgZ			
CU0442	YDgZC			
CU0176	ZCCPOT			
CU0177	ZDEFPOT			
CU1156	ZDgZ			
CU0456	ZDgZC			
00124 SYM-CLS				

FTN5.5

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1

```

SUBROUTINE ADDMEM(IIND,NROWS,IARR)
  CSUB+
  C      ADDMEM      IJUN71 *****
  C      ADD NROWS OF ARRAY IARR TO LIST MEMORY.
  C      IIND = STARTING INDEX
  C      COMMON/LISTMEM/IAVAL
  C      DIMENSION IARR(1)
  C      NC=0
  C      IF (NROWS = 5) GO TO 1
  1      IARR(1)=1+5
  C      NC=NC+1
  C      IF (NC=405) 2,3,5
  2      I=1+5
  C      GO TO 1
  3      IARR(I) = IAVAL
  C      IAVAL=(N)
  C      RETURN
  C      END

```

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5.4TS

ADDLEN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ADDLEN

LISTLEN

EXTERNAL SYMBOLS

ORIGIN

IDENT

ADDLEN

0011
00003

00001

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ED

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5.475 0911.4EM

P00003	ADDME	00003	00077	00103	00000	00000	00001
P00037	HEIM	00071	00077	00103	00000	00000	00003
P00001	UIC	00005	00042	00043	00005	00005	00001
P00072	ENFVG	00006	00036	00037	00000	00000	00001
P00000	EXIT	00075					
P00011	PRU001	00051	00052				
P00013	PRU002	00057	00060				
P00020	PRU003	00065	00066				
P00023	PRU004	00061	00062				
P00033	PRU005	00067	00070				
P00034	PRU006	00053	00054				
P00016	GETP	00044	00055				
P00070	GETPU	00047	00063	00102			
P00107	I	00012	00016	00017	00026	00007	00032
P00003	IAHR	00020	00033				
C00000	LAVALL	00031	00031	00035	00035		
P00004	INZ	C0011	00034				
P00037	INITIAL	00006					
P00016	.1	00014	00030				
P00026	.2	00024					
P00031	.3	00024	00025				
P00036	.4	00015					
P00003	NR405	00013	00023	00022			
P00110	NC	00010	00021				
P00055	PFU0002	00050					
P00063	PFU0003	00055					
P00071	PFU0004	00064					
X00001	Q8401CT	00000	00004				
C00034	SYMBCL5						

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104 FORMAT (3X,6(1H-),12X,8(1H-),/.25A,46.6A,16.12A,F8.1)
105 FORMAT (//,15X,4H BOMBERS)
106 FORMAT(5(//,10A,12H RED WEAPONS)
107 FORMAT(5(//,10A,14H TOTAL IN GAME)
END

50000
51000
52000
53000
54000

AGZSUM

TJENT

00447
00133
00500
00447
00413

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES
AGZSUM
HARPOIT
NAMES

EXTERNAL SYMBOLS
THEN
UNOJIT
STM
UNSI JLL

AGZSUM

SATS

5.4TS AG/SUM

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P00133 AG/SUM	00133		
P001423 REFIN	00142		
P00146 CHART	00146		
P00174 AG/SUM	00174		
P00202 AG/SUM	00202		
P00223 AG/SUM	00223		
P00247 AG/SUM	00247		
P00255 AG/SUM	00255		
P00277 AG/SUM	00277		
P00323 AG/SUM	00323		
P00340 AG/SUM	00340		
P00363 AG/SUM	00363		
P00372 AG/SUM	00372		
P00404 AG/SUM	00404		
P00427 AG/SUM	00427		
P00430 AG/SUM	00430		
P00431 AG/SUM	00431		
P00432 AG/SUM	00432		
P00434 AG/SUM	00434		
P00467 AG/SUM	00467		
C00036 INHREGCL			
C00055 INHREGTY			
P00423 INITAL			
P00161 .10			
P00227 .1			
P00303 .2			
P00345 .3			
P00354 .6			
P00004 .100			
P00023 .101			
P00041 .102			
P00050 .103			
P00060 .104			
P00103 .105			
P00111 .106			
P00122 .107			
P00435 .1			
P00436 .1			
C00000 NAMECLS			
C00002 NAMESIDE			
C00000 NAMESTIDE			
C00021 NAMESTIDE			
P00003 NAMESTCT			
C00017 NAMESTCT			

40000
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42000
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44000

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55 INT - 1
JMT - 1
59 CALL NEXTENT
END

FTMS.S

SATS

ALAUN

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CU

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3

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ALAUN

ASMS

EDATA

TIME

EXTERNAL SYMBOLS

UNODICT.

HIST

PLANTS

NEXTENT

RANK

IDENT

ALAUN

03112

00003

00050

01200

00002

5.475

ALAUN

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CU0525	JMT	CU051	CU071	CU072
CU0025	JMT	CU030	CU031	
CU0524	MHT			
CU0525	MHT			
CU0530	NALT			
CU0030	NALTC			
CU0520	NCH			
CU0020	NCAC	CU040	CU040	
CU0515	NDH	CU044		
CU0015	NDHIC			
CU0510	NOLC	CU045		
CU0010	NOLCC	CU073		
XU0004	NEATEVNT			
CU0530	NPLAN			
CU0504	NRTYP			
CU0004	NRTYP			
CU0000	OUTDATA			
CU0521	PZNAV	CU040		
CU0021	PKNAV	CU040		
CU0000	PLACRT	CU041	CU022	
XU0003	PLANTS	CU004		
XU0001	UBODICT	CU000	CU004	
XU0005	RANF	CU017		
CU0500	SIUE	CU042		
CU0000	SIDEC	CU042		
CU0522	SPARE			
CU0022	SP3			
CU0531	TACRT			
CU0031	TACRTIC			
CU0000	TIME	CU056	CU056	
CU0532	TINC	CU057	CU057	
CU0032	TINCO			
CU1126	XD6Z	CU053		
CU0426	XD6ZC	CU053		
CU0026	XX			
CU1142	YD6Z	CU054		
CU0442	YD6ZC	CU054		
CU1156	ZD6Z	CU055		
CU0456	ZD6ZC	CU055		
CU135 SYMBOLS				

```

SUMHCUTINE AREAAMD
CSUBH  AREAAMD 1 JUN 71 *****
C      TESTS FOR SURVIVAL OF MISSILES AGAINST AN AREA DEFENSE SYSTEM
COMMON/AMDATA/AMT(20,3),PSEL(2),PAK(2),PRM(2),PAKD(2)
COMMON/AREADATA/AMT(20,3),NLNR(20),ISVERLAP(20),ARAD
TYPE INTEGER AMT,AMTZ
COMMON/DEFZONE/DEFZONE
TYPE INTEGER DEFZONE,Z
CUSE  EDATAM 26AUG7C *****
COMMON/EDATA/SIDE,IBASE,INDM,JNTAM,NATYP,OGXC,DVYC,DHCHC,
1      ITYP,ICLASS,INEG,IALER(5),NPMSC,NTARSC,
1      M4PLIST(18),MLAUNLS(18),MLIST(27),CUTDATA(320),
1      SIDE,INBASE,INTAM,NATYP,OGX,DGT,DHCHC,
1      ITYPE,ICLASS,IREG,IALERT,NMPS,NTARSC,
1      M4PLIST(18),MLAUNLS(18),MLIST(27),INDATA(32)
TYPE INTEGER CUTDATA,SIDE,CSIDE,MAIM,TATM,MPLIST
TYPE INTEGER DVX,DVY,DHCH,OGXC,DVYC,DHCHC
TYPE INTEGER TALMC,AAIMC
EQUIVALENCE (SIDE,CUTDATA(1)),(SIDE,INDATA(1))
EQUIVALENCE (IMPLGAD,INDATA(1)),(NMIRV,INDATA(8))
EQUIVALENCE (INITVULC,CUTDATA(7)),(INITVULC,INDATA(7))
EQUIVALENCE (TCFC,CUTDATA(27)),(TCF,INDATA(27))
DIMENSION MDATA(14),MATA(14),TDF(14),TCFC(14)
EQUIVALENCE (MDATA,CUTDATA(13)),(MDATA,INDATA(13))
EQUIVALENCE (AAIM,INDATA(15))
EQUIVALENCE (TALMC,CUTDATA(14)),(AAIM,CUTDATA(15))
EQUIVALENCE (NMHDS,CUTDATA(13))
DIMENSION FALIST(270)
EQUIVALENCE (MLIST,FMLIST)
CEND  EDATAM *****
EQUIVALENCE (ALL,INDATA(16))
COMMON/MTSTABH/IAHEX,NAL,NMHUSK,NDET,NAHEA,NTERM
COMMON/INDEX/INDEX(30)
COMMON/KEYWORDS/KEYARRAY(20)
1      (TCCL,KEYARRAY(2)),(KEYTAR,KEYARRAY(9)),(KEYTIN,KEYARRAY(8))
EQUIVALENCE (KDEFZCN,KEYARRAY(15)),(KUEFCMP,KEYARRAY(16))
EQUIVALENCE (KEYARRAY(13),IAHEA)
DIMENSION AINTZ(3),ICHD(3)
EQUIVALENCE (ICAT,CUTDATA(50))
CUSE  NBCELL 22JUN71 *****
CEND  NBCELL *****
1 CONTINUE
C      SIDE IS ATTACKING SIDE, CSIDE IS DEFENDING SIDE
C      CSIDE = 3 - SIDE
C      STORE NO. WHDS. ENTERING
C      NAREA = NMHDS
C      TEST IF TARGET IS DEFENDED BY AREA DEFENSE
C      IF UNDEFENDED, SKIP AREAAMD EVEN) AND CALL TERMAMD
1A = IGET(IAREA,INTAR,STATUS)
101 IF (1A.LE.0) 22,102
102 L = 1

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UEFZONE = IGET(KDEFZONE,INTAR,STATUS)
Z = UEFZONE
IF NO RADAR COVERAGE, SKIP AREABMD
200 IF (NLRM(DEFZONE).GE.1)ZUL+22
201 NINTM = AINT(Z+1) + AINT(Z+2) + AINT(Z+3)
C IF NO INTERCEPTIONS, SKIP AREABMD
IF (NINTR.LE.0)Z2+2
C RECORD CALL TO AREABMD
2 CALL HIST(18,1)
C INITIALIZE COUNTERS, FILL ITEMS USED BY SUBROUTINE MIST
NPNENDEC=NAL=KCOL=C
IAREAX = IA
NMDSX = NMDS
C TEST FOR PREFERENTIAL DEFENSE
3 IF (LANDF(CSUE).EQ.2)Z8+4
C PREFERENTIAL--TEST IF TARGET PREVIOUSLY ATTACKED
4 IAT=IGET(IATTACK,INTAR,STATUS)
5 IF (IAT.EQ.0)B+51
C PREVIOUSLY ATTACKED
51 CALL HIST(18,2)
GO TO 9
C TEST IF TARGET SELECTED FOR DEFENSE
6 IF (PSEL(CSUE).GE.NANF(-1))B2+61
C NOT SELECTED
61 ISEL = C
CALL HIST(18,3)
GO TO 63
C SELECTED
62 ISEL = 1
63 IX = INTAR
C TURN ON PREFERENTIAL AREA BMD FLAG, SET AREA DEFENSE FLAG
7 CALL IPUT(IATTACK,IX,STATUS)
C CALL IPUT(IAREAX,IX,ISEL,STATUS)
C TEST IF CURRENT TARGET IS PRIMARY TARGET OF WEAPON
IF (KCOL)Z3+71
C PRIMARY--TEST IF TARGET IS COLLOCATED
71 KCOL=IGET(KCOL,INTAR,STATUS)
IF (KCOL)Z2+8
C COLLOCATED--SAVE INDEX OF PRIMARY TARGET, TURN ON COLLOCATION FLAG
72 IATC = INTAR
KCOL = 1
C GET LOCATION IN COLAR OF THIS TARGET
KIND = IFIND(INTAR)
C GET NUMBER OF TARGETS IN COLLOCATED GROUP
73 NTA=IGET(KEYNTA,KIND,COLAR)
C IF 0, TARGET FOLLOWS. IF NOT GO BACK NTA TARGETS FOR NEXT
IF (NTA)Z4+75
74 KIND = KIND-NTA
75 KIND = KIND+1
C GET NEXT TARGET INDEX--SEE IF IT IS PRIMARY TARGET OF GROUP
IAT=IGET(KEYTIN,KIND,COLAR)
IF (IAT.EQ.0)Z7+8
C TEST IF TARGET IS SELECTED FOR DEFENSE
8 IF (ISEL)Z9+21
C TEST IF THERE ARE ENOUGH INTERCEPTORS FOR ALL OBJECTS

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C 9 IF (NINTH .GE. AA[M]11) *32
C 114 ENOUGH---NUMBER ALLOCATED=NUMBER OF AREA AIM POINTS
C 115 NAL=AAIM
C 116 REDUCE INTERCEPTION SUPPLY OF BASE WITH MOST MISSILES FIRST
C 117 NINTH = NINTH - AAIM
C 118 ORDER INTERCEPTION BASES BY NUMBER OF MISSILES
C 119 DO 116 I = 1,3
C 120 ICHD(I) = 3
C 121 AINTZ(I) = AINT(Z,I)
C 122 DO 113 I = 1,2
C 123 K = I+1
C 124 DO 113 J = K,3
C 125 IF (AINTZ(I) .LT. AINTZ(J)) 112,111
C 126 111 ICHD(I) = ICHD(J) - 1
C 127 GO TO 113
C 128 112 ICHD(J) = ICHD(J) + 1
C 129 113 CONTINUE
C 130 ICHD1 = ICHD(1)
C 131 ICHD2 = ICHD(2)
C 132 ICHD3 = ICHD(3)
C 133 IF (AINT(Z, ICHD1) .GE. AAIM) 117,118
C 134 IF (AINT(Z, ICHD2) .GE. AAIM) 117,118
C 135 IF (AINT(Z, ICHD3) .GE. AAIM) 117,118
C 136 117 AINT(Z, ICHD1) = AINT(Z, ICHD1) - AAIM
C 137 118 IF (AINT(Z, ICHD1) .GE. AAIM) 119,120
C 138 119 AINT(Z, ICHD2) = AINT(Z, ICHD2) - AAIM
C 139 AINT(Z, ICHD1) = 0
C 140 GO TO (12,35),L
C 141 120 AINT(Z, ICHD3) = NINTH
C 142 AINTZ(I) = ICHD1
C 143 AINTZ(J) = ICHD2
C 144 AINTZ(K) = ICHD3
C 145 IF (AINT(Z, ICHD1) .GE. AAIM) 117,118
C 146 IF (AINT(Z, ICHD2) .GE. AAIM) 117,118
C 147 IF (AINT(Z, ICHD3) .GE. AAIM) 117,118
C 148 121 CALL HIST(11,6)
C 149 122 GO TO (12,35),L
C 150 CHECK FOR LEAKAGE
C 151 DO 17 I = 1,NMHD5
C 152 IF (PAK(CSIDE),GE,HANF(-1)) 15,16
C 153 *AHEAD LEAKS THROUGH---INCREASE NUMBER OF PENETRATORS
C 154 NPEN = NPEN + 1
C 155 GO TO 17
C 156 *AHEAD KILLED---TEST FOR REMOVAL
C 157 IF (PHEM(CSIDE),GE,HANF(-1)) 17,16
C 158 KILLED *AHEAD NOT REMOVED
C 159 NDEC = NDEC + 1
C 160 CONTINUE
C 161 ND = TAIM - NMHD5
C 162 CHECK FOR TERMINAL DECAY LEAKAGE
C 163 DO 20 I = 1,ND
C 164 IF (PAK(CSIDE),GE,HANF(-1)) 20,19
C 165 TERMINAL DECAY LEAKS THROUGH
C 166 NDEC = NDEC + 1
C 167 20 CONTINUE
C 168 NMHD5X = NMHD5 - NPEN
C 169 TAIM = NPEN + NDEC
C 170 HFCMD RESULTS
C 171 CALL HIST(18,5)
C 172 CALL FOR WAITING OUT OF BLOCK FOR AHEADMD EVENT

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```

C      CALL HISTWRIT
C      CALL FOR TERMINAL BALLISTIC MISSILE DEFENSE EVENT
C 22  CALL TERMNO
      RETURN
C      WANDOR AREA DEFENSE--DETERMINE NUMBER OF INTERCEPTORS TO USE
C 24  CALL HIST(18,7)
      DO 3, I=1,AAIM
      IF (PSEL(CSIDE) *LT. HANF(-1)) 30,29
C 29  NAL = NAL + 1
C 30  CONTINUE
C 31  IF (NININ*GE*NAI)33,32
C 32  IF 50, SET NUMBER ALLOCATED TO NUMBER AVAILABLE
C 34  AINT(2,1)=C
      NININ = 0
      CALL HIST(18,6)
      DO 4, I=1,4
      REDUCE NUMBER OF INTERCEPTORS BY NUMBER ALLOCATED
C 33  L=2
      GO TO 115
C 35  NININ = NININ - NAL
      COMPUTE NUMBER OF OBJECTS NOT ATTACKED
C 40  NREN = AAIM-NAL
      N1 = NMDS+1
      N2 = TAIM+1
      DO 41 I=1,NMDS
      ICAT(I)=1
      DO 42 I=1,N1,TAIM
      ICAT(I)=2
      DO 43 I=1,N2,AAIM
      ICAT(I)=3
C 43  CALL REORDER TO RANDOMLY REARRANGE ICAT
      CALL RANDOER(AAIM)
      DETERMINE IF EACH UNATTACKED OBJECT IS A TERMINAL DECCY OR WARHEAD
C 44  IF (ICAT(INDX(1))-1)40,45,44
      INCREASE NUMBER OF DECCYS
      NDEC = NDEC+1
      GO TO 46
C 45  INCREASE NUMBER OF PENETRATIONS
      NPEN = NPEN+1
C 46  CONTINUE
      COMPUTE NUMBER OF WARHEADS AND TERMINAL AIM POINTS REMAINING
      NMDS = NMDS-NPEN
      TAIM = TAIM-NDEC-NPEN
      GO TO 12
      END

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5.4TS AREABMO

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

AREABMO

AREADAT

DEFZONE

EDATA

MISTABM

INDEX

KEYMOHUS

19501

0800ICT.

IGET

-LIST

IPUT

IFIND

MISTWIT

TERM-HU

RANCHUEH

RAMF

TUENT AREABMO

J0742

J0011

J0012

J0145

J0001

J1200

J0006

J0046

J0024

54731

EXTERNAL SYMBOLS

5.4TS AREA#0

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5.4TS AREADMN

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003673 .34	00317	00336			
003674 .35	00317	00336			
003675 .4	00317	00336			
003676 .40	00317	00336			
003677 .41	00317	00336			
003678 .42	00317	00336			
003679 .43	00317	00336			
003680 .44	00317	00336			
003681 .45	00317	00336			
003682 .46	00317	00336			
003683 .5	00317	00336			
003684 .51	00317	00336			
003685 .6	00317	00336			
003686 .61	00317	00336			
003687 .62	00317	00336			
003688 .63	00317	00336			
003689 .7	00317	00336			
003690 .71	00317	00336			
003691 .72	00317	00336			
003692 .73	00317	00336			
003693 .74	00317	00336			
003694 .75	00317	00336			
003695 .8	00317	00336			
003696 .9	00317	00336			
003697 .EXASEA.	00317	00336			
003698 .NSTIFF.	00317	00336			
003699 J	00317	00336			
003700 JNTA4	00317	00336			
003701 K	00317	00336			
003702 KCL	00317	00336			
003703 KUEFCAP	00317	00336			
003704 KUEFZCN	00317	00336			
003705 KETAPRAY	00317	00336			
003706 KEYNTA	00317	00336			
003707 KEYTIN	00317	00336			
003708 LING	00317	00336			
003709 KOLCC	00317	00336			
003710 KRAU	00317	00336			
003711 L	00317	00336			
003712 LAMALIST	00317	00336			
003713 LING4	00317	00336			
003714 -DATA	00317	00336			
003715 -DATA	00317	00336			
003716 MLADULLIS	00317	00336			
003717 MLIST	00317	00336			
003718 MLISTC	00317	00336			
003719 MAPALIST	00317	00336			
003720 N1	00317	00336			
003721 N2	00317	00336			
003722 NAL	00317	00336			
003723 NAME4	00317	00336			
003724 NAME4	00317	00336			
003725 NAME4	00317	00336			
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P00735 MDEC	00307	00370	00411	00420	00571	00572	00603	
C00003 MDEC	00307	00370	00411	00420	00571	00572	00603	
P00735 MINTA	00307	00370	00411	00420	00571	00572	00603	
C00074 MLAR	00307	00370	00411	00420	00571	00572	00603	
C00507 MLEB	00307	00370	00411	00420	00571	00572	00603	
P00737 MPEH	00307	00370	00411	00420	00571	00572	00603	
P00740 MREM	00307	00370	00411	00420	00571	00572	00603	
P00741 PTA	00307	00370	00411	00420	00571	00572	00603	
C00515 NTARG	00307	00370	00411	00420	00571	00572	00603	
C00015 NTARG	00307	00370	00411	00420	00571	00572	00603	
C00007 NTARG	00307	00370	00411	00420	00571	00572	00603	
C00514 NMDIS	00307	00370	00411	00420	00571	00572	00603	
C00014 NMDISC	00307	00370	00411	00420	00571	00572	00603	
C00002 NMDISK	00307	00370	00411	00420	00571	00572	00603	
C00514 NMDAS	00307	00370	00411	00420	00571	00572	00603	
C00014 NMDASC	00307	00370	00411	00420	00571	00572	00603	
C00514 NMTYP	00307	00370	00411	00420	00571	00572	00603	
C00014 NMTYPC	00307	00370	00411	00420	00571	00572	00603	
P00606 CSIDE	00307	00370	00411	00420	00571	00572	00603	
C00000 CUIOATA	00307	00370	00411	00420	00571	00572	00603	
P00614 P000000	00307	00370	00411	00420	00571	00572	00603	
C00004 PAK	00307	00370	00411	00420	00571	00572	00603	
C00010 PAK	00307	00370	00411	00420	00571	00572	00603	
C00005 PAK	00307	00370	00411	00420	00571	00572	00603	
C00002 PSEL	00307	00370	00411	00420	00571	00572	00603	
X00001 J80DICT	00307	00370	00411	00420	00571	00572	00603	
X00011 MAF	00307	00370	00411	00420	00571	00572	00603	
X00010 MAF200R	00307	00370	00411	00420	00571	00572	00603	
C00500 SIE	00307	00370	00411	00420	00571	00572	00603	
C00000 SIEC	00307	00370	00411	00420	00571	00572	00603	
C15531 STATUS	00307	00370	00411	00420	00571	00572	00603	
C00515 TAIM	00307	00370	00411	00420	00571	00572	00603	
C00001 TCOL	00307	00370	00411	00420	00571	00572	00603	
X00007 TET440	00307	00370	00411	00420	00571	00572	00603	
C00532 TCF	00307	00370	00411	00420	00571	00572	00603	
C00032 TCF	00307	00370	00411	00420	00571	00572	00603	
P00254 TS00003	00307	00370	00411	00420	00571	00572	00603	
P00372 TS00004	00307	00370	00411	00420	00571	00572	00603	
P00414 TS00005	00307	00370	00411	00420	00571	00572	00603	
P00456 TS00006	00307	00370	00411	00420	00571	00572	00603	
P00526 TS00010	00307	00370	00411	00420	00571	00572	00603	
P00540 TS00011	00307	00370	00411	00420	00571	00572	00603	
P00552 TS00012	00307	00370	00411	00420	00571	00572	00603	
P00577 TS00013	00307	00370	00411	00420	00571	00572	00603	
P00621 UP00000	00307	00370	00411	00420	00571	00572	00603	
P00631 UP00004	00307	00370	00411	00420	00571	00572	00603	
P00643 UP00005	00307	00370	00411	00420	00571	00572	00603	
P00653 UP00006	00307	00370	00411	00420	00571	00572	00603	
P00663 UP00007	00307	00370	00411	00420	00571	00572	00603	
C00516 WPLIST	00307	00370	00411	00420	00571	00572	00603	
P00224 W500001	00307	00370	00411	00420	00571	00572	00603	

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P00234 #500002. 00250
P00243 #500003. 00253
P00340 #500004. 00371
P00402 #500005. 00413
P00444 #500006. 00455
P00470 #500007. 00472
P00523 #500010. 00525
P00535 #500011. 00537
P00547 #500012. 00551
P00563 #500013. 00570
P00607 2 00641
00331 SYMCLS

00047 00632

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SIMULROUTINE REPORT
C SUNK 2000000
C DECREASES PENETRATIONS WHEN A BOMBER ABORTS IN AN ENEMY ZONE
COMMON/EDATA/ 4JAN71
CUSE
COMMON/EDATA/SIDE,IBASE,INDM,INIDM,INATYP,DSKC,DUGC,DHCH,ETYP,
1 ICLASS,IREG,IALENT,INZC,NOHIC,NULC,IATC,NCMC,PKNAV,SPC(2),
2 IATC,JA(2),NALT,ABORTC,TINC(8),INDPC(8),INDE(8),
3 IATPC(12),XUGZ(12),YUGZ(12),ZUGZ(12),B(6),OUTDATA(32),SIDE,
4 IBASE,INDV,INATYP,DUGC,DHCH,ITYPE,ICLASS,IREG,IALENT,
5 INZC,NOHIC,NULC,IATC,NCMC,PKNAV,SPARE(2),INAT,EXTRA(12),NALT,
6 ABORT,TINC(8),INIDM(8),INDE(8),INATYP(12),XUGZ(12),YUGZ(12),
7 ZUGZ(12),OUTDATA(32)
EQUIVALENCE (SIDE,OUTDATA(1)), (SIDE,INDATA(1))
EQUIVALENCE (NPLAN,NALT), (NHI,INIDM), (NHI,INATYP)
TYPE INTEGER DUGC,DHCH,XUGZ,YUGZ,ZUGZ
TYPE INTEGER DUGC,DUGC,DHCH,XUGZ,YUGZ,ZUGZ
TYPE INTEGER OUTDATA,SIDE,SIDE
CEND
COMMON/ZONES/AREA(63),ZDEFECT(63),ZCROST(63),NPENZ(63),KILLZ(63),
1 VAXZONE(2)
1 CONTINUE
C TEST IF BOMBER HAS LEFT ITS LAUNCH ZONE
C 2 IF(INZONE .LE. 2.03, ICLASS .NE. 2) *3
C DECREASE NUMBER OF PENETRATIONS IN CURRENT ZONE
C 3 NPENZ(INZONE) = NPENZ(INZONE) - 1 - NOHI - NOLC
C SECOND CALL TO BOMBER ABORT EVENT AND RECORD PLACE OF ABORT
C 4 CALL HIST(13,1)
C 5 IF(INDE(11) .EQ. 13) *7
C RECORD SCHEDULED SPLASH
C 6 CALL HIST(13,2)
C RETURN
C RECORD RANDOM ABORT
C 7 CALL HIST(13,3)
END

```

5.4TS BABORT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

BABORT
TIME
EDATA
ZONE

EXTERNAL S' (HOLS
ORUDICT.
MIST

IDENT

00046
00003
00002
01200
00475

BABORT

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CU0000	AREA				
CU0472	M				
PU0003	MASCHT	00003			
PU0040	HEGIN.	00040			
CU0505	UGA				
CU0004	UGAG				
CU0516	UGY				
CU0006	UGYC				
CU0517	DM24				
CU0017	DM24C				
PU0001	EXIT.	00001	00031	00035	
PU0000	EXIT.	00000	00033	00037	
CU0526	EXITA	00041			
CU0001	EXITA				
CU0002	EXITA				
CU0513	EXITA	00022	00030	00034	
CU0013	EXITA				
CU0517	EXITA				
CU0017	EXITA				
CU0001	EXITA				
CU0511	EXITA	00012	00012		
CU0011	EXITA				
PU0012	EXITA	00012	00025		
CU0524	EXITA	00025			
CU0024	EXITA				
CU0501	EXITA				
CU0500	EXITA				
CU0772	EXITA	0014			
CU0272	EXITA				
CU0002	EXITA				
CU0152	EXITA				
CU0512	EXITA				
PU0000	EXITA	00000			
CU0503	EXITA	00007	00015	00015	
CU0514	EXITA	00007	00015	00015	
CU0014	EXITA				
CU0512	EXITA				
CU0012	EXITA				
CU0510	EXITA				
CU0010	EXITA				
CU0112	EXITA				
CU0412	EXITA				
PU0007	EXITA	00007			
PU0007	EXITA	00007			
PU0015	EXITA	00013	00014		
PU0022	EXITA	00010	00011	00014	
PU0025	EXITA				
PU0030	EXITA				
PU0034	EXITA	00017			
CU0003	EXITA				
CU0525	EXITA				
CU0025	EXITA				

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CU0374 KILLZ
CU0473 MAZOE
CU0724 HMT
CU0525 NWT
CU0530 NALT
CU0030 NALTC
CU0520 NC4
CU0020 NC4C
CU0515 NDMT
CU0015 NMIC
CU0516 NOLC
CU0016 NOLC
CU0275 NPENZ
CU0530 NPLAV
CU0504 NWTYP
CU0004 NWTYPQ
CU0000 GUIDATA
CU0521 PRNAV
CU0021 PRNAV
X00001 WRJDICT.
CU0500 SLUE
CU0000 SLUES
CU0522 SPARE
CU0022 SPJ
CU0531 TADPT
CU0031 TADPTC
CU0000 TIME
CU0532 TINC
CU0032 TINC
CU1126 AUGZ
CU0426 AUGZ
CU0026 XX
CU1142 YGZ
CU0442 YGZC
CU0176 ZCCPT
CU0077 ZLFPCT
CU1156 ZGZ
CU0450 ZGZC

00134 SYN-OLS

00017 00020
00020
00016 00016 00021 00021
00000 00004

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SUMCHLINE HDAMAGE
CSURK HDAMAGE 29SEP71 *****
C CALCULATES HURST DAMAGE TO A TARGET ON A COLLOCATED TARGET GROUP *****
CUSE AGZSUM 28APR71 *****
COMMON/AGZSUM/AGZ(2+00),TYD(2+00) *****
CEND AGZSUM *****
COMMON/HEADAT/ALNT(2+00),NLNR(20),LCOVERLAP(20),KRAO *****
TYPE INTEGER DEFZONE=DEFCHP,PAINT *****
CUSE ASYS 28APR71 *****
COMMON/ASYS/PLAHRNT(20),CEPA(20) *****
CEND ASYS *****
CUSE 604HER 28APR71 *****
COMMON/604HER/PLABT(80),TMDEL(80),ASKATE(80),PRABT(80),CEPS(80) *****
1 TLINT(80),FUNCH(80) *****
604HER *****
CEND 604HER *****
CUSE BRKPRNT 28APR71 *****
COMMON/BRKPRNT/NTYPECUM(15),NOLUEYP(15),INDREGCL(15),INDREGTY(250) *****
BRKPRNT *****
CEND BRKPRNT *****
COMMON/CAPACITY/DEFPCOT(60),CPCOT(60) *****
CUSE UA-AGE 28APR71 *****
COMMON/UA-AGE/UAH2INT,VULN(63) *****
CEND UA-AGE *****
TYPE INTEGER VULN *****
EDATAR 4JUN71 *****
COMMON/EDATAR/SIOEG,IBASE,INDA,INTAR,NTYPECUM(15),DMCHG,DMCHG,ITYPE,
11CLASSC,IREG,IALERTG,INZONS,NOLC,NULC,IALC,NCMS,PKNAVG,SPC(2),
214TC,JWT,XX(2),NALC,TABRTG,TINCO(80),INPC(80),INDEB(80),
3 11TYPE(12),ADGZ(12),YDGZ(12),ZDGZ(12),B(6),CUTDATA(32),SID,
4 1BASE,INDV,INTAR,NTYPE,DMCHG,DMCHG,ITYPE,CLASS,INREG,IALERT,
5INZONS,NOLC,IALC,NCM,PKNAV,SPARE(2),INT,JMT,EXTRA(2),NALC,
6TARNT,TINCO(80),INPC(80),INDE(80),INTYPE(12),ADGZ(12),YDGZ(12),
7ZDGZ(12),INDATA(32) *****
EQUIVALENCE (SIOEG,CUTDATA(1)), (SIDE,INDATA(1)) *****
EQUIVALENCE (NPLAN,NALC), (INMF,IM), (MRT,JMT) *****
TYPE INTEGER DMCHG,DMCHG,ADGZ,YDGZ,ZDGZ *****
TYPE INTEGER CUTDATA,SIDE,SIOEG *****
EDATAR ***** *****
CEND *****
DIMENSION IZC(4) *****
COMMON/KEYHDS/KTAR,KZON(3) *****
COMMON/GROUND/LAGX,LAGY *****
COMMON/PRINT/PRINT(60) *****
TYPE LOGICAL PRINT *****
COMMON/KEYHDS/KEYHARAY(20) *****
EQUIVALENCE (KEYHARAY(1),ISTAT), (KEYHARAY(2),ICGL),
1 (KEYHARAY(3),TARDEFLO), (KEYHARAY(4),TARDEFHI),
2 (KEYHARAY(5),MISDEF), (KEYHARAY(6),TVULN),
3 (KEYHARAY(7),ZONE) *****
EQUIVALENCE (KEYHARAY(8),KEYTIN), (KEYHARAY(9),KEYNTA),
1 (KEYHARAY(10),KEYDT), (KEYHARAY(11),KEYDY),
2 (KEYHARAY(15),KDEFZON), (KEYHARAY(16),KDEFCHP) *****
1 (KEYHARAY(17),KDEF) *****
1 (KEYHARAY(18),KDEFHL) *****
CUSE MISSLE 28APR71 *****
COMMON/MISSLE/PINC(80),PARCRT(80),PDES(80),PPPF(80),TPCWER(80),
1 T-ET(80),INT(80),CEPH(80),PKMS(30),TLINT(80),IFUNCH(80) *****
1 T-ET(80),INT(80),CEPH(80),PKMS(30),TLINT(80),IFUNCH(80) *****

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CEND CUSF *****
      NAMES 28APR71 *****
      COMMON/NAMES/NAMESIDE(2),NAMCLS(15),NAME TYPE(25J) *****
CEND NAMES *****
      COMMON/COMMONOUT/COMMONOUT *****
CUSE WARHEAD 28APR71 *****
      COMMON/WARHEAD/YIELD(50),POUD(50),CEPN(50) *****
CEND WARHEAD *****
      COMMON/ZONES/AREA(63),ZDEFPOT(63),ZCCPOT(63),NPENZ(63),KILLZ(63),
1 MAXZONE(2) *****
CUSE NRCCELL 22JUN71 *****
      COMMON/19501/NRCCELL,LINKM(7000),STATUS(12000),COLAR(4000) *****
CEND NRCCELL *****
      TYPE INTEGER OSIZE *****
C WRITE HISTORY TAPE BLOCK FOR EVENT CALLING RUNST DAMAGE *****
C 1 CALL HISTWRIT *****
C HECCHO CALL TO RUNST DAMAGE *****
      CALL HIST(10,1) *****
      IC = ICLASS *****
      IF(IC.GT.2)2,21 *****
2 IC = 2 *****
21 NAGZ(IC,ITYPE) = NAGZ(IC,ITYPE) + 1 *****
      TYU(IC,ITYPE) = TYU(IC,ITYPE) + YIELD(NNTYP) *****
C INITIALIZE COLOCATION FLAG *****
3 KCOL = 0 *****
C TEST IF KILLED BY NAVAL ATTACK WEAPON *****
31 IF(IPKNAV.GT.0) 25,32 *****
C COMPUTE YIELD *****
32 Y2=YIELD(NNTYP)**(2./3.) *****
      MOH = DMCH *****
C COMPUTE COORDINATES FROM WEAPON TO TARGET *****
4 INTX = -IAGX *****
      INTY = -IAGY *****
C TEST IF TARGET IS DYNAMIC *****
5 IK=IDET(IKEEP,INTAN,STATUS) *****
      IF(IK) 6,51 *****
C TEST IF TARGET IS DEAD *****
6 ISTAT=IGET(ITSTAT,INTAN,STATUS) *****
      IF (ISTAT.EQ.0) 61,7 *****
C COMPUTE WEAPON TARGET RADIUS SQUARED (IN NAUTICAL MILES) *****
7 *R2 = (INTX*INTX + INTY*INTY) * .0004 *****
C TEST LEthal RADIUS OF WEAPON VS. WEAPON-TARGET RADIUS *****
8 IF (4*TRZIMTY23.LT.*R2) 81,9 *****
C CALL HIST TO RECORD NO DAMAGE CALCULATION *****
51 CALL HIST(10,3) *****
      GO TO 12 *****
C HECCHO TARGET ALREADY DEAD *****
61 CALL HIST(10,5) *****
      GO TO 12 *****
C RECORD TARGET TOO DISTANT *****
81 CALL HIST(10,6) *****
      GO TO 12 *****
C GET TARGET VULNERABILITY *****
9 IVULN=IGET(ITVULN,INTAN,STATUS) *****
      NVN = VULN(IVULN) *****

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C      GET WEAPON RADIUS AGAINST THIS TARGET
C      WR = VLRAD(YIELD(WTYP),NVN,RCB,FN)
C      GET SURVIVAL PROBABILITY AND SEE IF TARGET SURVIVES
      SK = FN * WTR2 / (WWR)
      ERDEF(-SK)
      SK2=SK*SK
      SUM=1.*SK+SK2/2.
      IF (FN.LT.%) 93,94
94      SUM = SUM+.16667*SK*(SK2+.25*SK*(SK2+.20*SK*SK2))
93      SKRP=ER*SUM
10      IF (SSKP.GT. MAXP(-1)) 11,121
C      RECHO TARGET SURVIVAL
121  CALL WIST(1,0,6)
      GO TO 12
C      RECHO TARGET KILL AND SET STATUS TO DEAD
11  CALL IPUT(STAT,INTAR,0,STATUS)
      CALL WIST(1,0,2)
C      GET DEFENSE ZONE AND DEFENSE COMPONENT
      DEFZONE=IGET(KDEFZON,INTAR,STATUS)
      DEFCMP=IGET(KDEFCMP,INTAR,STATUS)
C      FIND TARGET CLASS--SEE IF KILLED TARGET IS A DEFENSE INSTALLATION
      IF (INTAR.LT. INDEGCL(4)) 12,113
110  IF (INTAR.GE. INDEGCL(5)) 11,111
111  IF (INTAR.GE. INDEGCL(5)) 113,112
41  IF (INTAR.LT. INDEGCL(14)) 112,42
42  IF (INTAR.LT. INDEGCL(15)) 116,12
C      TARGET IS COMMAND/CONTROL SITE
112  IC = 4
      GO TO 114
C      TARGET IS FIGHTER BASE
113  IC = 5
C      FIND TARGET TYPE
114  JJ = NTYPECUM(IC) + 2
      KK = NTYPECUM(IC) + 1
      IT = 1
      DO 115 II = JJ, KK
      IF (INTAR.GE. INDEGCL(II)) 116,115
115  IT=TYPE = IT
      GO TO 117
116  IT = IT + 1
C      IF DO IS COMPLETED, ERROR IN BREAKPOINT TABLE
      PRINT 9115,IT,INTAR,JJ,KK
9116  FORMAT(17H HKPT ERROR, 11=,15,7H INTAR=,15,4H JJ=,15,4H KK=,15)
      IT=TYPE = IT
C      GET ZONE FOR THIS TARGET
117  IZONE=IGET(IZONE,INTAR,STATUS)
      IF (IZONE.LE.0) 1171,1172
1171  NTARTYPE=ITARTYPE+JJ-2
1172  NTARTYPE=ITARTYPE+JJ-1
      PRINT 9117,NAME,TYPE(NTARTYPE),INTAR,IC
9117  FORMAT(1H AB,15H TARGET NUMBER,10,0H CLASS,12,10H IS IN ZONE ZER
10)
      CALL ZMORT
1172  CONTINUE
      IF (IC.EQ.4) 12,0160
C      TARGET IS AN AREA ARM BASE
118  IC = 14

```

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PAGE NO.

```

IF (DEFCONP.LE. 0)12.0119
119 IF (DEFCONP.LE.3)140.150
C TARGET IS A MISSILE INTERCEPTOR BASE
14 IF (AIN) (DEFZONE,DEFCONP).EQ.0)12.1400
1400 AIN=(DEFZONE,DEFCONP) = 0
DC 141 I=1,3
IF (AIN) (DEFZONE,I).EQ.0)141.12
141 CONTINUE
C SLINE=--SIDE
PRINT 142,NAMES(I),SIDE,DEFZONE
142 FORMAT(5H ALL 44.37M AREA INTERCEPTIONS DONE IN AREA ZONE #12)
C TO 12
C TARGET IS A BOMBER INTERCEPTOR BASE
16 ZDEFPT(IZONE)=ZDEFPT(IZONE)-CCPOT(IITAR,TYPE)
PRINT 9160,IZONE,ZDEFPT(IZONE),IITAR,TYPE,ZDEFPT(IITAR,TYPE)
9160 FORMAT(7H IZONE=,15.17H ZDEFPT(IZONE)=,9F10.4,10.13.4)
C TO 12
C TARGET IS COMMAND/CONTROL SITE
120 CCPOT(IZONE)=ZCCPOT(IZONE)-CCPOT(IITAR,TYPE)
PRINT 9119,IZONE,ZCCPOT(IZONE),IITAR,TYPE,ZCCPOT(IITAR,TYPE)
9119 FORMAT(7H IZONE=,15.17H ZCCPOT(IZONE)=,9F10.4,10.13.4)
C TO 12
C TARGET IS A LONG RANGE RADAR---FIND DEFENSE ZONES AFFECTED BY
LOSS OF LONG RANGE RADAR
150 DC 155 I=1,20
IITAR=IGET(IITAR,I,ICVRLAP)
IF (IITAR.EQ.INIAR) 151.155
151 IZON(1)=IGET(KZON(1),I,ICVRLAP)
151 IZON(2)=IGET(KZON(2),I,ICVRLAP)
151 IZON(3)=IGET(KZON(3),I,ICVRLAP)
DC 154 J=1,3
IF (IZON(J).EQ. 0) 154.152
152 RAD=IZON(J)
IF (INLR(KRAD).GT. 0)153.154
C REDUCE NUMBER OF LONG RANGE RADARS IN ZONE
153 INLR(KRAD)=INLR(KRAD)-1
IF (INLR(KRAD).EQ.0)156.154
156 PRINT 9156,KRAD)
9156 FORMAT(35H NO MORE RADARS COVERING AREA ZONE #12)
154 CONTINUE
C TO 12
155 CONTINUE
C TEST IF TARGET IS DEFENDED
12 KDEF=IGET(IARDEF,INIAR,STATUS)
LOEF=IGET(IARDEF,INIAR,STATUS)
C REDUCE DEFENSIVE EFFECTIVENESS, SET STATUSES TO NEW VALUES
IF (KDEF.GT. 0) 13.135
13 KDEF=KDEF-1
CALL IPUT(IARDEF,INIAR,DEF,STATUS)
135 IF (LOEF.GT. 0) 136.136
136 LOEF = LOEF - 1
CALL IPUT(IARDEF,INIAR,DEF,STATUS)
C TEST IF CURRENT TARGET IS PRIMARY TARGET OF WEAPON
R=IFKCOL.EQ. 0) 14.17
C TEST IF THIS PRIMARY TARGET IS COLLOCATED
14 KCOL=IGET(IICOL,IITAR,STATUS)

```

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```

C IF(KLOC) 15.88
C COLLOCATED. STORE INDEX OF PRIMARY TARGET. TURN ON COLLOCATION FLAG
15 INTG = INTAN
KCOL = 1
C GET LOCATION IN ARRAY COLAR OF THIS TARGET
16 KIND = IFIND(INTAN)
C TEST IF PRIMARY TARGET FOUND IN COLAR
IF (KIND.EQ.0) 37.17
C GET THE NUMBER OF TARGETS IN THE COLLOCATED GROUP
17 NTA=IGET(KEVTAN,KIND,COLAR)
C IF 0. NEXT TARGET FOLLOWS. IF NOT. GO BACK NTA TARGETS FOR NEXT
IF (NTA) 17.173
174 KIND = KIND - NTA
C #CHDS OF HISTOUT IN USE = 19 + NO. OF TARGETS IN COLLOCATED GROUP
NCHDSOUT = 19 + NTA
173 KIND = KIND + 1
C GET NEXT TARGET INDEX. SEE IF IT IS THE PRIMARY TARGET OF GROUP
INTAN=IGET(KEVTAN,KIND,COLAR)
18 IF (INTAN.EQ. INTG) 18.19
19 IF (PANAV.GT.0) 25.20
C IF NOT. GET DISTANCE FROM THIS TARGET TO NEXT ONE
20 IND=IGET(KEVDX,KIND,COLAR)
IND=IGET(KEVDY,KIND,COLAR)
C COMPUTE COORDINATES OF NEXT TARGET
INTX=INTX + IND
INTY=INTY + IND
IF (PRINT(27)) 191.5
191 PRINT 9019, INTX,INTY
9019 FORMAT (211.1)
GO TO 4
C SECOND TARGET NOT IN COLAR
87 CALL HIST(1,97)
88 RETURN
C KILLED BY NAVAL ATTACK WEAPON
25 ISTAT=IGET(ISTAT,INTAN,STATUS)
IF (ISTAT) 26.27
C TARGET KILLED
26 CALL IPUT(ISTAT,INTAN,0,STATUS)
CALL HIST(1,92)
GO TO 87
C TARGET ALREADY DEAD
27 CALL HIST(1,95)
GO TO 81
END

```

5.4TS BUADAGE

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

IDENT BUADAGE

1275
00124
00500
00145
00050
01060
00447
00120
00100
01200
00004
00002
00002
00024
01560
00413
00001
00226
00475
54731

BUADAGE
AGZSUM
AREADPT
ASMS
BOMHEN
BHKPNT
CAPACITY
DAMAGE
DATA
KEYWDS
GROUP
IPRINT
KEYWCHOS
MISSLE
NAMES
NOROUT
WAMHEAD
ZONES
19501
02007111
THEND.
03000000
ORUDICT.
HISTMIT
HIST
IGET
VLRAD
IPUT
ZABORT
IFIND
RANF
EAPF
STM.
QNSINOL.

EXTERNAL SYMBOLS

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EU

U

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5.4TS	HUA-AGE	01/03/72	EU	U	PAGE NO.	7
C00240	AR-MATE					
C00000	AINI					
C00000	AREA					
C00472	R					
P00124	BDAMAGE					
P01175	BEGIN.					
C00050	CCPGI					
C00024	CEPA					
C00500	CEPH					
C01060	CEPM					
C00144	CEPM					
P01113	CNRRTI.					
C45071	COLAR					
P00206	CRFMT.					
P01110	DEFCMP					
C00000	DEFPCT					
P01111	DEFZONE					
C00505	UGA					
C00005	UGAO					
C00506	UGY					
C00006	UGY					
C00507	UHC					
C00007	UHCAC					
P00001	VICT.					
P01231	EK					
P01200	ENDING.					
P00000	EXIT.					
X00015	EXPF					
C00526	EXTRA					
P01232	FN					
P00006	FORMAT.					
P00455	G00000.					
P00505	G000001.					
P00500	G000002.					
P00504	G000003.					
P00630	G000004.					
P00707	G000005.					
P01054	G000006.					
X00006	WIST					
X00005	WIST-MIT					
P01233	WCB					
P01234	I					
C00000	IAGX					
C00001	IAGY					
C00513	IAGENT					
C00013	IAGENTC					
C00517	IALT					
C00017	IALTIC					
C00001	IRASE					

5.4TS	MESSAGE	01/03/72	EO	J	PAGE NO.	8				
P01235	IC	00142	00145	00406	00412	00414	00501	00513	00514	01143
C00511	ICLASS	00137	00137							
C00011	ICLASSC									
P01236	IDX	01027	01035							
P01237	IDV	01034	01036							
X00013	IFIND	01005								
C00740	IFUNCA									
C01140	IFURCM									
X00007	IGET	00205	00213	00255	00345	00457	00634	00643	00650	00715
C00524	IMF	00722	00744	00773	01007	01030	01062			
C00024	IMFC									
P01240	II	01423	00426	00436						
P01241	IK	01211								
C00020	IKCEP	00207								
P01114	INCOMPT.	01143	01173							
P01115	INCOMPT.	00147	00531	01153						
P01116	INCOMPT.	01524	01162							
C00501	INBASE	00535	01122	01134	01163					
C00500	INDATA									
C00036	INDREGL	00362	00366	00366	00372	00372	00376	00376	00402	00402
C00055	INDREGLTY	00427	00427							
C00772	INDRE									
C00272	INDREC									
C00002	INDM									
C00652	INDP									
C00152	INDPC									
C00502	INDV									
P01170	INITIAL.									
C00503	INITAN									
P01242	INIC	00127	00215	00257	00336	00347	00355	00361	00365	00371
C00514	INIC4E	00307	00375	00375	00401	00401	00425	00445	00446	00477
C00014	INZONC	00477	00641	00717	00717	00724	00735	00747	00762	00767
C00120	ISVERLAP	01013	01013	01014	01014	01014	01072			
C00000	IPRINT	00703	01015							
X00011	IPUT									
C00740	IR	00334	00733	00745	01070					
C00512	IREG									
C00012	IRESC									
P01243	ISAT	00217	01066	00434	00435	00445	00455			
P01244	IT	00422	00432							
P01245	ITAR	00640								
P01246	ITARTYPE	00434	00450	00466	00563	00576	00607	00622		
C00510	ITYPE	01167	01167							
C00010	ITYPE									
P01247	IWLN	00201	00262							
P01250	IWLN	00202	00222	00223	01034	01035	01047			
P01251	IWLN	00204	00224	00224	01036	01037	01051			
C01112	IWLN									
C00412	IWLN									
P00003	IWLN	00647	00654	00661	00664	00667				

5.415 HDA-MGE

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	01/03/72	00605	00610	00403	00400	00304	00311	00317	00327
P.1252 LZONE									
P00130 .1	0.4063	00464	00501	00572	00605	00610			
P00321 .10									
P00334 .11	00326								
P00365 .110	00364	00363							
P00371 .111	00367								
P00405 .112	00373								
P00411 .113	00373	00374							
P00414 .114	00410								
P00432 .115	00430								
P00434 .116	00430	00431							
P00457 .117	00433								
P00464 .1171	00465								
P00511 .1172	00465								
P00513 .118	00404								
P00521 .119	00517								
P00615 .120	00512								
P00715 .12	00242								
P00327 .121	00247	00254	00334	00304	00400	00403	00317	00327	00527
P00731 .13	00537	00560	00630	00711					
P00740 .135	00425	00326							
P00743 .136	00727	00730							
P00824 .140	0.522								
P00833 .140	0.526								
P00754 .14									
P00540 .141									
P00631 .150	0.523								
P00742 .15	0.751								
P00443 .151									
P00666 .152	0.505								
P00671 .153									
P00711 .154	00555								
P00712 .155	00542								
P00617 .156									
P00501 .160	0.511								
P00745 .16									
P00773 .17	0.753	00771							
P00755 .173	01000								
P01011 .174	01000								
P01014 .18									
P01017 .19	01.16								
P01043 .141	01.42								
P01144 .2									
P01023 .20	01.21	01021							
P00147 .21	01.43	00143							
P01042 .25	01.43	01022							
P01070 .25	01.47								
P01112 .27	01.47								
P00135 .3									
P00157 .31									
P00164 .32	00162	00162							
P00201 .4	00367	00370							
P00375 .41									

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5.15 DAMAGE

12

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J

ED

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00626 00705 01052

C00031	TAMORIS	00717	00735						
C00003	TAMORPHI	00724	00747						
C00002	TAMORFLO	00756							
C00001	TCCL	00756							
X00002	TRENU.	00453	00556	00602	00626	00705	01052		
C00532	TINC								
C00032	TI4CC								
C00620	TLINTA								
C01320	TLINTM								
C00120	TMDEL								
C00500	TPWELH								
C00620	TRET								
P00437	TS00001.	00424							
C00000	TSIAT	00215	00336	01064	01072				
C00005	TVULN	00257							
C00240	TYD	00152	00154	00155					
P01127	UP00001.	00534	00541	00633	00713	01123	01130	01131	01132
P01137	UP00004.	00141	00142	00407	00413	00515	01140	01141	01142
P01156	UP00006.	00360	01147	01150	00413	00515	01140	01141	01142
P01156	UP00007.	00352	01157	01160	01161	01153	01154	01155	01156
P01164	UP00010.	01117	01170	01171	01172	01174	01174	01174	01174
X00010	VLRAD	00267							
C00001	VULN	00263							
P01272	WR	00273							
P00425	WS00001.	00440							
P00535	WS00002.	00542							
P00634	WS00003.	00714							
P00663	WS00004.	00710							
P01273	WT42	00231							
C00000	WT421MT	00232	00234	00275					
C01126	XD6Z		00232						
C00426	XD6ZC								
C00026	XX								
P01274	Y23	00173	00233						
C01142	Y06Z								
C00442	Y06ZC								
C00000	YIELD	00153	00154	00171	00171	002-5	00271		
X00012	ZABORT	00505							
C00176	ZCCPST	00506	00506	00611	00611	00620	00620		
C00077	ZDEFPST	00562	00562	00565	00565	00574	00574		
C01156	Z06Z								
C00456	Z06ZC								
C00006	ZONE	00461							
00455	SYMBOLS								

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SUMROUTINE HLAUN
CSURH      PLAUN 27SEPT71 *****
C          TESTS FOR A SUCCESSFUL BOMBER OR TANKER LAUNCH
CUSE      BOMBER 28APR71 *****
COMMON/BOMBER/PLANT(8),IMDEL(80),AKRATE(80),ARABT(8),CEPB(80),
1  TLINT(80),IFUNCH(80) *****
CEND      BOMBER *****
COMMON/DATA/ISIZE *****
CUSE      EDATAH 4JAN71 *****
COMMON/EDATA/SIDES,IBASE,INDM,JNTAM,NMTPC,DGKC,DGYS,DMHBC,ITYPC,
1  ICLASS,IREGG,IALETC,INCON,NDHLC,NULGC,IALTC,NMCG,PKNAV,SPG(2),
2  RHTC,JTOKT(2),NALTC,IAORTC,TINGC(80),INDPC(80),INUEC(80),
3  ITWPC(12),XDGC(12),YDGC(12),XDZ(12),YDZ(12),B(6),OUTDATA(32),SIDE,
4  INHASE,INDV,INTAR,NMTPC,DGKC,DGYS,DMHBC,ADGC,YDGC,ZDGC
5  IZCEN,NUMI,NOLC,IALTC,NM,PKNAV,SPAR(2),I-1,J4TEXTA(2),NALI,
6  IARHTC,TING(80),INDP(80),INDE(80),ITWPC(12),XDGC(12),YDGC(12),
7  ZDGC(12),INDATA(32) *****
EQUIVALENCE (SIDES,OUTDATA(1)), (SIDE,INDATA(1))
EQUIVALENCE (NPLAN,NALI), (MMI,IMI), (MMT,JMT)
TYPE INTEGER DGKC,DGYS,DMHBC,XDGC,YDGC,ZDGC
TYPE INTEGER DGKC,DGYS,DMHBC,ADGC,YDGC,ZDGC
TYPE INTEGER OUTDATA,SIDE,SIDES *****
CEND      EDATAH *****
COMMON/KEYWORDS/KEYARRAY(2) *****
EQUIVALENCE (KEYARRAY(1),TSTAT) *****
CUSE      TANKER 28APR71 *****
COMMON/TANKER/PLANT(40),ITWBL(40),
1  TARRATE(40),TLINIT(40),IFUNCT(40) *****
CEND      TANKER *****
COMMON/TIME/TIME,FUTIME *****
CUSE      WACELL 22JUN71 *****
COMMON/195-1/WACELL,LINKM(700),STATUS(1200),COLAR(4000) *****
CEND      WACELL *****

1 CONTINUE
2 GET LAUNCH BASE INDEX FROM BOMBER/TANKER HISTORY TABLE
  IALC = 1
  RECORD CALL TO HLAUN--INBASE MUST BE FILLED IN FIRST
  CALL HIST(2,1)
  GET STATUS OF LAUNCH BASE AND TEST I- IT IS DEAD
  ISTAT=GET(TSTAT,INBASE,STATUS)
  IF (ISTAT.EQ. 0) GO 3
  TEST VEHICLE CLASS, GET CHARACTERISTICS
  3 IF (ICLASS.EQ. 3) 32,31
  CLASS 2 CONSISTS OF BOMBERS
  31 PLA = PLANT(ITYPE)
  TM = TMDEL(ITYPE)
  AMR = AMRATE(ITYPE)
  GO TO 35
  CLASS 3 CONSISTS OF TANKERS
  32 PLA = PLANT(ITYPE)
  TM = TMDEL(ITYPE)
  AMR = AMRATE(ITYPE)
  C TEST FOR VEHICLE LAUNCH ABORT
  35 IF (PLA.LE. AMR*(-1)) GO 4

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PTNS.5

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C      COMPUTE DELAYED LAUNCH TIME
4  FTIME = TIME - LOG(RANF(-1))/PM
C  WFCO=0 TAKE=OFF ABORT(DELAY)
C  CALL HIST(2,2)
C  PLANI NEW LAUNCH FOR BOMBER/TANKER
5  CALL PLANIS(INDR(LMT),ISIZE)
C  WFTUMY
C  COMPUTE BOMBER/TANKER IN-FLIGHT ABORT TIME
6  IF (ABORTLS.D) 7*8
7  ABORT = 1000.
   GO TO 4
8  ABORT = TIME-LOG(RANF(-1))/ABR
9  CONTINUE
C  RECORD SUCCESSFUL BOMBER/TANKER LAUNCH
C  CALL HIST(2,4)
C  PLANI NEXT BOMBER/TANKER EVENT
C  CALL NEXTENT
C  RETURN
C  RECORD UNSUCCESSFUL LAUNCH -DEAD BASE
R0 CALL HIST(2,3)
END

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35000
36000
37000
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39000
40000
41000
42000
43000
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50000
51000

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5.4TS

BLAUN

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EU

J

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P00143	ABR	00035	00045	00100	00115				
C00240	ABRATE	00034	00034						
C00472	H								
P00132	MEGIN.	00132							
P00003	HLAUN	00003							
C00500	CEPH								
C45071	CCLAP								
C00505	DGA								
C00005	DRC								
C00506	DGT								
C00006	DGTC								
C00507	DHCB								
C00007	DHCB								
P00001	DICT.								
P00133	ENDING.	00005	00013	00016	00051	00057	00062	00067	00111
P00000	EXIT.	00124	00127						
C00525	EXTRA	00006	00077	00125	00131				
C00001	FUTIME	00005							
X00002	HIST	00012	00066	00120	00126				
C00513	IALEHT								
C00013	IALEHTC								
C00517	IALT	00011							
C00017	IALTC								
C00001	IBASE								
C00511	ICLASS								
C00011	ICLASSC	00024	00024						
C00740	IFUNCB								
C00240	IFUNCT								
X00003	IGET								
C00524	IHT	00015	00007	00071	00071				
C00024	IHTC	00007							
C00501	INDASE	00010	00017						
C00500	INDATA								
C00772	INDE	00072	00076						
C00272	INDEC								
C00002	INDM								
C00652	INDP	00010							
C00152	INDPC								
C00502	INDV								
P00132	INITIAL.	00006							
C00503	INITAR								
C00514	INZOME								
C00014	INZONG								
C00512	IREG								
C00012	IREGC								
C00000	ISIZE	00076							
P00144	ISLAT	00021							
C00510	ITYPE	00027	00027	00037	00037				
C00010	ITYPC								
C01112	ITYPC								
C00412	ITYPC								
P00007	.1								
P00007	.2								

PJ0024	.3	00022			
PJ0027	.31	00025			
PJ0037	.32	00026			
PJ0046	.33	00028			
PJ0054	.4	00053			
PJ0071	.5				
PJ0100	.6	00052			
PJ0113	.7	00101			
PJ0116	.8	00102			
PJ0126	.8C	00103			
PJ0129	.9	00105			
PJ0134	.ERASER.				
PJ0076	.ZCUGI.	00055	00060	00107	00112
C00003	JNIAH				
C00525	JW1				
C00025	JW1C				
C00000	KEYARRAY				
C00001	LINKM				
X00007	LOGF				
C00524	MHI				
C00525	MFI				
C00530	NALT				
C00030	NALTC				
C00000	NBCELL				
C00520	NC4				
C00020	NC4C				
C00515	NDHI				
C00015	NDHIC				
C00516	NDLC				
C00016	NDLCC				
X00005	NEXTVNT				
C00530	NPLA				
C00504	NWTP				
C00004	NWTPC				
C00000	CU0ATA				
C00521	PKNAV				
C00021	PKNAV				
P00145	PLA				
C00000	PLANT				
X00004	PLANTS				
C00360	PHARI				
X00001	OR-NDICT.				
X00006	HANF				
C00500	SIDE				
C00000	SIDES				
C00522	SPARE				
C00022	SPC				
C15531	STATUS				
C00531	TARHMT				
C00031	TARHMT				
C00120	TARHATE				
C00000	TARE				
C00532	TINC				
C00032	TINCC				
		00031	00041	00052	
		00030	00030		
		00074			
		00000	00004		
		00050	00056	00110	
		00020			
		00104	00104	00117	00117
		00044	00044		
		00004	00064	00116	00116

S-4TS

RLAUN

CU0620 TLINIH
CU0170 TLINIT
PU0146 TM
CU0120 TMDEL
CU0300 TPLAHT
CU0000 TSLAT
CU0050 TTDEL
CU1126 X0GZ
CU0426 X0GZC
CU0026 XX
CU1142 Y0GZ
CU0442 Y0GZC
CU1156 Z0GZ
CU0456 Z0GZC
CU171 SYMCLS

CU033
CU032
CU040
CU017
CU042

CU043
CU032
CU040
CU042

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EU

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SUMROUTINE HMISTAT
CSUMK      HMISTAT 29SEP71 *****
COMMON/ARMDATA/INDEF(2),PSEL(2),PAK(2),PRM(2),PAKD(2)
COMMON/AREADAT/AIN(20,3),NLAK(20),ISVERLAP(20),KRAD
TYPE INTEGER AIN
CUSE      HMISTAT 29SEP71 *****
COMMON/ARMKPT/NTYPECUM(15),NBLUETYP(15),INDEGCL(15),INDEGTY(250)
CEND      HMKPT *****
COMMON/KEYCORIS/KEYARMAY(20)
EQUIVALENCE (ITERM,KEYARMAY(14))
CUSE      NAMES 29SEP71 *****
COMMON/NAMES/NAMESIDE(2),NAMCLS(15),NAMETYPE(250)
CEND      NAMES *****
NAMES *****
COMMON/ARMATA/PIK(2),NFIN(500)
CEND      ARMATA *****
TYPE INTEGER REHZON=ENDZON
CUSE      XCELL 22JUN71 *****
COMMON/19501/XCELL,LINKM(7000),STATUS(12000),CLAR(4000)
CEND      XCELL *****
DO 7 K=1,2
  INTCTIS=0
  REHZON=1+10*(K-1)
  REHZON=10+10*(K-1)
  PRINT 101,NAMESIDE(K)
  DO 3 J=REHZON+ENDZON
    INTCTIS=INTCTIS+INTCT
  3 CONTINUE
  DO 4 I=1,3
    INTCTIS=INTCT+INTCTIS
  4 IF (INTCT) 5,3
  5 PRINT 104,J,INTCT
  INTCTIS=INTCTIS+INTCT
  3 CONTINUE
  PRINT 106,INTCTIS
  106 FORMAT(1X,5MTOTAL,5X,120)
  7 CONTINUE
  101 FORMAT(1X,10,120)
  104 FORMAT(1X,A2,6X,REHZON,3X,1/NAMEA INTERCEPTORS)
  IFEG = INDEGCL(13)
  IFND = INDEGTY(NTYPECUM(13)+1) - 1
  PRINT 102
  102 FORMAT(//,4X,6MTARGET,3X,7HDEFENSE,5X,12HINTERCEPTORS)
  DO 5 I=1,6+LEND
    ITERM=(ITERM+1,STATUS)
  5 IF (ITERM,CD) 5,2
  2 PRINT 103,1,IT,NFIN(17)
  103 FORMAT(310)
  5 CONTINUE
  END

```

5.4TS HMDSTAT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HMDSTAT
ARMHDATA
AREADAT
HAKPDT
KEYWCRUS
NAMES
THMDATA
195 1

EXTERNAL SYMBOLS

THEND
JMODICT
IGET
STR
GMSINOL

IUENT

00275
00054
00012
00145
00447
00024
00413
00766
5473

RMDSTAT

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J

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2

[illegible]

5.ATS B-STAT

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CU

U

CO0017 MILLER TYP
CO0074 NLAR
CO0002 RTIRI
CO0000 NITPECUM
PO0230 PO0001.0
PO0242 PO0002.0
CO0004 PAK
CO0010 PARO
CO0006 PDEM
CO0002 PSEL
CO0000 PTK
X00002 UN
X00001 UN
CLES
X00001 SIM
X00001 TEND
PO0137 TEND
PO0220 TEND
PO0234 TEND
PO0247 TEND
PO0002 TEND
PO0107 TEND
PO0114 TEND
PO0174 TEND

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00142 00163 00214
00146 00166 00214

00134 00230 00235 00237 00241 00241
00172 00217 00243 00250 00252 00254
00140 00254 00255

00115 Stat-015

```

SUBROUTINE HCHMF
  CSUBR      26AUG70 *****
  C          MOVES UNUSED HISTORY TABLE LINES. WEAPON TYPES OF KILLED VEHICLE
  C          INTO HISTOCT BLOCK FOR WRITING DATA HISTORY TYPE
  CUSE       4JAN71 *****
  COMMON/EDATA/SIDEC,IBASE,INDM,JNTAR,NWTYPE,DGSC,DGVC,DHCHS,ITYPE,
1  ICLASS,IMEG,IALENT,INZCG,NHMC,NOLCO,IALIC,NCHC,PRNAV,SPS(12),
2  IJTC,JTIC,X(12),NALT,ITABCTG,ITMC(10),INDPC(10),INDEX(10),
3  IATYP(12),XDGZ(12),YDGZ(12),ZDGZ(12),X(1),CUTDATA(120),SIDE,
4  INHASE,INDV,INTAR,NWTYPE,DGSC,DGVC,DHCHS,ITYPE,IGLASS,IALENT,
5  INZCG,INDM,NOLCO,IALIC,NCHC,PRNAV,SPARE(12),INT,JNT,EXTRA(12),NALT,
6  IAHCHT,ITMC(10),IDP(10),INDC(10),INTYP(12),ZDGZ(12),YDGZ(12),
7  ZDGZ(12),INDATA(120)
  EQUIVALENCE (SIDEC,CUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (NPL,NALT), (NMH,INT), (NMH,JNT)
  TYPE INTEGER DGAC,DGVC,DHCHS,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER DGSC,DGVC,DHCHS,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER CUTDATA,SIDE,SIDEC
  DATA *****
  COMMON/HISTOCT/NSIDE,NHASE,NIMOV,NINTAR,NMTYP,NTIME,NEVENI,
1  NPLAC,NWTYPE,NICLASS,NINEG,NIALENT,NMUU,VINZCH,NHCHCT,NIALENT,
2  NAC,NAS,NWTYPE,NHCODE,DUMY(3),NMH,THELAY,FINCH(10),INBP(10),
3  INDE(10),NWTYPE,NHISTOCT(1200)
  EQUIVALENCE (NSIDE,NHISTOCT(1))
  COMMON/INCHMF/INCHMF
  COMMON/INCHDOCT/INCHDOCT

  CEND

  C          SEE IF HCHMF WANTED
  C          1 IF (INCHMF.EQ.0) 1,2
  C          2 COMPUTE NUMBER OF LINES REMAINING IN HISTORY TABLE
  C          3 FILL IN UNEXECUTED HISTORY TABLE LINES OF KILLED VEHICLE
  C          4 FILL IN A MAXIMUM OF SIX UNUSED WEAPONS OF THE KILLED VEHICLE

  1 IF (INCHMF.EQ.0) 1,2
  2 NMT = NMT - NALT
  3 I = 1, NMH
  4 INC(1) = INC(NMT-1)
  5 INC(1) = INC(NMT-1)
  6 INC(1) = INC(NMT-1)
  7 J = INC(1)
  8 IF (J.EQ.0)
  9   1,2
  10  NCHDOCT = 152
  11  NCHMF =
  12  RETURN
  13  NCHDOCT = 25
  14  END

```

PROGRAM LENGTH	ADMF	IDENT	RCAF
ENTRY POINTS		00107	
BLOCK NAMES		00003	
		01200	
		00010	
		00001	
		00001	
EXTERNAL SYMBOLS			
		0101100	
		0000101	
		MINC	

[illegible]

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5.4TS

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31/03/12

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PAGE NO.

4

[illegible]

00002	00054
00060	00060
00012	00012
00046	
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00013	
00013	00014
00070	00071
00005	00065
00051	00004
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00026	00026
00027	00027

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5.4TS

HC-4pf

PU0046 TSJ001. 00J17
PU0070 TSJ002. 00J55
PU0022 WSJ001. 00J45
PU0090 WSJ002. 00J67
CU1126 X06Z
CU0426 X06Z
CU0026 XX
CU1142 Y06Z
CU0442 Y06Z
CU1156 Z06Z
CU0456 Z06Z
00167 SYM40LS

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EU

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PAGE NO.

5

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SUBROUTINE BTMPKIN
  CSURH      26APRT1
  CUSE       4JAN71
  COMMON/EDATA/SIDE,IBASE,INDM,JNIA,NMTPC,DGK,DGVC,DHCHC,IITPC,
  1 ICLASS,IREG,IALENT,INZCH,NDHIC,NULCC,IALTCNCH,PKNAV,SPS(2),
  2 IMTC,JWC,FX(2),NMLTC,TAHRTG,TINC(60),INDP(100),INDEX(50),
  3 IITPC(12),XDGC(12),YDGC(12),ZDGC(12),H(6),OUTDATA(132),SIDE,
  4 INBASE,INDM,INTAM,NMTP,DG,DGVC,DHCH,IITPC,ICLASS,IREG,IALENT,
  5 INZCH,NDHIC,IALTCNCH,PKNAV,SPARE(2),INT,JAT,EXTRA(2),NALT,
  6 TAHRTG,TINC(60),INDP(50),INDEX(50),IITP(12),XDGC(12),YDGC(12),
  7 ZDGC(12),INDATA(132)
  EQUIVALENCE (SIDE,OUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (INPLAN,NALT), (NMLTC,INT), (NMLTC,JAT)
  TYPE INTEGER DG,DGVC,DHCH,XDGC,YDGC,ZDGC
  TYPE INTEGER OUTDATA,SIDE,SIDEC
  TYPE INTEGER EDATA
  COMMON/IPS4ICH/IPS41,IPS42,IPS43,IPS44,IPS45,IPS46
  1,IPS47
  31 PRINT 601,(INDATA(11),I1=1,26)
  N = 1
  PRINT 605
  NMTP = NMTP
  IF (NMTP .LE. 10) 62,61
  61 NMTP = N + 9
  62 IF (NMTP .LT. NMTP) 64,63
  63 NMTP = NMTP
  64 PRINT 602,(TINC(I1),I1=NMTP)
  PRINT 603,(INDP(I1),I1=NMTP)
  PRINT 604,(INDEX(I1),I1=NMTP)
  PRINT 609
  IF (NMTP .GE. NMTP) 66,65
  55 N = NMTP + 1
  GO TO 61
  66 IF (IPS45-6,ETA-0,CH,ICLASS,NE,?) 20,35
  35 N = 1
  NMTP = NMTP
  IF (NMTP .LE. 10) 66,67
  67 NMTP = N + 9
  68 IF (NMTP .LT. NMTP) 70,69
  69 NMTP = NMTP
  70 CONTINUE
  72 PRINT 605,(IITP(IJ),IJ=NMTP)
  PRINT 606,(XDGC(IJ),IJ=NMTP)
  PRINT 606,(YDGC(IJ),IJ=NMTP)
  PRINT 606,(ZDGC(IJ),IJ=NMTP)
  PRINT 609
  73 IF (NMTP .GE. NMTP) 20,71
  71 N = NMTP + 1
  GO TO 67
  20 MFTGN
  601 FORMAT(7H INDATA,I10/7X,I10/7X,6I10)
  602 FORMAT(7H TINC ,10F10.4)
  603 FORMAT(7H INDP ,10I10)
  604 FORMAT(7H INDE ,10I10)
  605 FORMAT(7H IITP ,10I10)

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FTNS.5

006 FORMAT(7X,10I10)
009 FORMAT(1H)
END

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2

43000
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5.4TS HTINPRIN

01/03/72

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PAGE NO.

3

HTINPRIN

IDENT

00352
00054
01200
00007

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HTINPRIN

EDATA
IPSWICH

EXTERNAL SYMBOLS

THENUS.
UNDDICI.
STM.
UNSIATL.

5.ATS RTINPRIN

PAGE NO. 4

ED

01/03/72

J

COU472 H
 COU473 BEGIN.
 COU474 RTINPRIN
 COU475
 COU476 CNVRT1.
 COU477 CNVRT1.
 COU478
 COU479 DGA
 COU480 UGAC
 COU481 DGY
 COU482 DGTG
 COU483 DMCR
 COU484 DMCR
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5.47S BTINPRIN

6

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6

EU

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00225

00244

00220

00220

P00351 NMT
 C00504 NMTYP
 C00004 NMTYPC
 C00000 GUIDATA
 C00521 PKNAV
 C00021 PKNAV
 X00002 OBWDICT.
 X00004 UNSINGL.
 C00500 SIDE
 C00008 SIDEC
 C00522 SPARE
 C00022 SPC
 X00003 STM.
 C00531 TACHT
 C00031 TACHTC
 X00001 THEND.
 C00532 TINC
 C00032 TINC
 P00133 TSU0002.
 P00151 TSU0003.
 P00167 TSU0004.
 P00245 TSU0005.
 P00263 TSU0006.
 P00301 TSU0007.
 P00317 TSU0010.
 P00065 W50001.
 P00127 W50002.
 P00145 W50003.
 P00163 W50004.
 P00241 W50005.
 P00257 W50006.
 P00275 W50007.
 P00313 W50010.
 C01126 X06Z
 C00426 X06ZC
 C00026 XX
 C01142 Y06Z
 C00442 Y06ZC
 C01156 Z06Z
 C00456 Z06ZC
 00217 SYMCLS

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S.ATS

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CHANGALT

IDENT

00023

00003

J1200

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

CHANGALT

EDATA

EXTERNAL SYMBOLS

00001CT.

HIST

NEXTEVNT

5.4TS CHANGALT

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3

CO0472	R			
PJ0017	REGIN.	00017		
PO0003	CHANGALT	00003		
CO0505	DGA			
CO0005	UGAC			
CO0506	DGY			
CO0005	DGYC			
CO0507	UNCR			
CO0007	UNCR			
PU0001	DICT.			
PU0020	ENDING.			
PU0000	EXIT.			
CO0526	EXTR.			
X00002	HIST			
CO0513	IALEHT			
CO0013	IALEHTC			
CO0517	IALT			
CO0017	IALT			
CO0001	IRASE			
CO0511	ICLASS			
CO0011	ICLASSC			
CO0524	INT			
CO0024	INTC			
CO0501	INDASE			
CO0500	INDATA			
CO0772	INDE			
CO0272	INDEC			
CO0002	INDM			
CO0652	INJP			
CO0152	INJPC			
CO0502	INDV			
PU0017	INITIAL.			
CO0503	INTAR			
CO0514	INZME			
CO0014	INZCIC			
CO0512	INEG			
CO0012	INEGC			
CO0510	ITYPE			
CO0010	ITYPEC			
CO1112	ITYPE			
CO0412	ITYPEC			
PO0014	*B			
CO0003	JNTAR			
CO0523	JNT			
CO0025	JNTC			
CO0524	MHT			
CO0525	MHT			
CO0530	NAL			
CO0030	NALC			
CO0520	NCH			
CO0020	NCHC			
CO0515	NCHI			
CO0015	NCHIC			
CO0516	NCLC			

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5.4TS CHANGALT

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EO

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4

C00016 NDLCC
 C00003 NEATEVNT 00014
 C00530 NPLAN
 C00504 NNTYC
 C00004 NNTYPC
 C00090 CUIDATA
 C00521 PRNAV
 C00021 PRNASC
 X00001 QBJOICT. 00000 05004
 C00500 SILE
 C00000 SUEC
 C00522 SPARE
 C00022 SP3
 C00531 TASHCHI
 C00031 TASHCHTS
 C00532 TINC
 C00032 TINC3
 C01120 XDZ
 C00420 XDZC
 C00026 XX
 C01142 YDZ
 C00442 YDZC
 C01156 ZDZ
 C00456 ZDZC
 00114 SYMBOLS

01/03/72

```

C      GET DATA FOR PLANTING BMD EVENTS
C      UC 11 I=1,NSMINV
C      PLANT AREA HALLISTIC MISSILE DEFENSE EVENT
      IMORE = TCF(I) - IPGMR(I,TYPE)
      IF (IMORE .LE. 0) GOTO 61
      IMORE = .00001
      61 IMORE = TIME + IMORE
      62 FILL TOT INDEX=002 AND DECAY DATA
C      7 CALL MUNPR(MDATA(I))
C      IF NOT MIRVED, PUT IN CORRECT DECAY DATA
      8 IF (NSMINV .GT. 1) GO,9
      9 TAIMC = NMDSC + NTDEC(IP,IS)
      10 TAIMC = TAIMC + NADCC(IP,IS)
      GO TO 11
C      LIST MINV TARGETS
      10 CALL HIST(3,3)
C      PLANT AREA BMD EVENT
      11 CALL PLANTS(18,12)
      RETURN
C      RECNO MISSILE DESTRUCTION IN LAUNCH PHASE
      70 CALL HIST(3,1)
      CALL HIST(3,4)
      UC 80 I=1,NSMINV
      CALL MUNPR(MDATA(I))
      80 CALL HIST(3,3)
      END

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S.4TS

CLAU

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

CLAU
EDAT
KEYMOUS
MISSLE
PAYLOAD
TIME
195.1

EXTERNAL SYMBOLS

PRODUCT.
INPUT
IGET
-IST
MUNDA
PLANTS

IDENT

00206
J0003
J1200
00024
J1560
00620
00002
54731

CLAU

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LU

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3

5.4TS

CLAUN

CO0032 TFC
 CO0500 TOWER
 CO0620 TRET
 PO0114 TSG0001.
 PO0140 TSG0002.
 CO0000 TSTAT
 CO0005 TVULN
 FO0145 UP00001.
 PO0155 UP00002.
 CO0516 WPNLIST
 PO0052 WSG0001.
 PO0127 WSG0002.
 00167 SY460LS

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ED

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SUBROUTINE DLAWN
  CSUBH      DLAWN      210670
  C          TESTS FOR SUCCESSFUL BOMBER LAUNCH OF A DECOY
  CUSE      EDATAH      4JAN71
  COMMON/EDATA/SIDE,IBASE,INOM,INTAH,NTYPE,DGCG,DGCG,DHCH,ITYPE,
  1 ICLASS,IMEGG,IALEMTG,INZONG,NDHLC,NULCG,IALTC,NLMO,PKNAV,SPC(2),
  2 IATC,JATC,XX(2),NALIC,IAHRTG,ITNG(180),INDPS(180),INUEG(180),
  3 ITYPEG(12),ADGZG(12),YDGZG(12),ZDGZG(12),B(6),CUTDATA(32),SIDE,
  4 ITHASE,INDV,INTAH,NTYPE,DGCG,DGCG,DHCH,ITYPE,ICLASS,IEG,IALEMT,
  5 INZONG,NULI,NULCG,IALTC,NLMO,PKNAV,SPARE(2),INT,JMT,EXTA(2),NALT,
  6 IAHRTG,ITNG(180),INUP(180),INDE(180),ITYPE(12),ADGZ(12),YDGZ(12),
  7 ZDGZ(12),INDATA(32)
  EQUIVALENCE (SIDE,CUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (NPLAN,NALT), (NMT,INT), (NMT,JMT)
  TYPE INTEGER DGCG,DGCG,DHCH,ADGZ,YDGZ,ZDGZ
  TYPE INTEGER DGCG,DGCG,DHCH,ADGZ,YDGZ,ZDGZ
  TYPE INTEGER CUTDATA,SIDE,SIDE
  CEND      EDATAH
  COMMON/TIME/TIME,PUTIME
  COMMON/ZONES/AREA(63),ZDEFPOT(63),ZCCPOT(63),NPENZ(63),KILLZ(63),
  1 MAXZ(12)

1 CONTINUE
C RECORD CALL TO DLAWN
CALL HST(15,1)
C CHANGE PENETRATORS
NMT=INT(JMT)
C NPENZ(INZONE)NPENZ(INZONE)+NU
2 NPENZ(INZONE)NPENZ(INZONE)+NU
C NO NEGATIVE MEANS TERMINATION OF HIGH ALTITUDE DECOYS
3 IF(INI)6,6,4
C IF(IALT)5,5,6
C LOW ALTITUDE DECOY
5 NLC=NDLC+ND
60 TO 7
C HIGH ALTITUDE DECOY
6 NHI=NDHI+ND
C PLANT HEAT EVENT FOR BOMBER
7 CONTINUE
8 CALL NEXTEVNT
END

```

SATS

DLAUN

01/03/72

EU

PAGE NO.

2

IDENT

DLAUN

00045

00003

01200

00002

00075

PROGRAM LENGTH

ENTRY POINTS

BLOCK NAMES

DLAUN

EDATA

TIME

ZONES

EXTERNAL SYMBOLS

QUADICT.

HIST

NEXTENVIT

5.ATS

DLAUN

01/03/72

EU

J

PAGE NO.

3

CU0030	AREA			
CU0472	H			
PU0040	REGIN.	00040		
CU0505	D64			
CU0005	UGAC			
CU0506	D6Y			
CU0006	DGYC			
CU0507	DMCR			
CU0007	DMCR			
PU0001	DICT.	00005	00010	00036
PU0003	DLAUN	00003		
PU0041	ENDING.	00006	00037	
PU0000	EXIT.	00041		
CU0526	EXTRA			
CU0001	FUTIME			
XU0002	HIST	00007		
CU0513	IALERT			
CU0013	IALERTC			
CU0517	IALT			
CU0017	IALT	00023	00023	
CU0001	IBASE			
CU0511	ICLASS			
CU0011	ICLASSC			
CU0524	INT	00012	00012	
CU0024	INTC			
CU0501	INBASE			
CU0500	INDATA			
CU0072	INDE			
CU0272	INDEC			
CU0002	INDM			
CU0652	INDP	00013		
CU0152	INUPC			
CU0502	INOV			
PU0040	INITIAL.			
CU0503	INTAK	00015	00015	
CU0514	INTNE			
CU0014	INTCIC			
CU0512	INLG			
CU0012	INEGO			
CU0510	ITYPE			
CU0010	ITYPC			
CU0112	ITYP			
CU0412	IMTYPC			
PU0007	.1			
PU0015	.2			
PU0021	.3			
PU0023	.4			
PU0024	.5			
PU0032	.6	00024	00024	00025
PU0035	.7	00022	00022	
PU0035	.8	00031		
CU0003	JNIAR			
CU0525	JWT			
CU0025	JMTC			

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DLAUM

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10

PAGE NO.

C00374 KILLZ
 C00473 HAZONE
 C00524 MHF
 C00525 NMT
 C00530 NALT
 C00030 NALTC
 C00520 NCM
 C00020 NCAC
 P00044 ND
 C00515 NDHI
 C00015 NDHIC
 C00516 NDLC
 C00016 NDLCG
 A00003 NEATEVNT
 C00275 NPENZ
 C00530 NPLAN
 C00504 NLTYP
 C00004 NLTYPG
 C00000 NUTDATA
 C00521 PKNAV
 C00021 PKNAV
 A00001 UBUDICT.
 C00500 SIDE
 C00000 SLUES
 C00522 SPARE
 C00022 SPC
 C00531 TACRT
 C00031 TACRTG
 C00000 TIME
 C00532 TINC
 C00032 TINC
 C00126 XUGZ
 C00426 XUGZC
 C00026 XK
 C00142 YUGZ
 C00442 YUGZC
 C00176 ZCCPST
 C00077 ZDEFPST
 C00156 ZUGZ
 C00450 ZUGZC
 00134 SYMHOLS

00014 00017 00021 00027 00033

00032 00032 00034 00034

00026 00026 00030 00030

00045 00016 00040 00020

00000 00004


```

GO TO 11
17 MEMT=MEMTMIN(MEATPV)
11 IF (MEMS%12)12,13,14
14 HERE=HERE+1; GOTO 24 OUTPUT UNIT
C
12 CONTINUE
IFP=ACOUT $ IICMD=INDATP(2).AND.77778
IFCQ(IIP)=ITCQ(IIP).ITCRO
13 CALL MARRAY(INDATP(1),ITCRO)
GO TO 11
C
15 HERE EXECUTE EVENT IN INDATP
15 CONTINUE
ITIME = INDATP(1)
IX = INDATP(2)/ILSM
IUEV = IX.AND.77778
IUEV = IX/ILSM
CALL FVONPK
IS = IUEV
JSA=(IS-1)/10+1
ISX=IS-(JSA-1)*10
GO TO (210,201,202),JSA
201 CALL ALARM $ GO TO 199
100 CALL ALARM $ GO TO 199
101 CALL ALARM $ GO TO 199
102 CALL ALARM $ GO TO 199
103 CALL REFUEL $ GO TO 199
104 CALL ESFC $ GO TO 199
105 CALL STAT $ GO TO 199
106 CALL ABTHIT $ GO TO 199
107 CALL LATHTIT $ GO TO 199
108 CALL FEMHMD $ GO TO 199
109 CALL HMDAGE $ GO TO 199
201 GO TO (110,111,112,113,114,115,116,117,118),ISX
110 CALL EAREA $ GO TO 199
111 CALL EAREA $ GO TO 199
112 CALL ECHGT $ GO TO 199
113 CALL ALARM $ GO TO 199
114 CALL RECOVERY $ GO TO 199
115 CALL TRANSALT $ GO TO 199
116 CALL AREHMD $ GO TO 199
117 CALL RECHK $ GO TO 199
118 CALL NAUCAL $ GO TO 199
202 GO TO (120,121,122),ISX
120 CALL MVAATH $ GO TO 199
121 CALL ENDGAME $ GO TO 199
122 CALL MORPHIN $ GO TO 199
199 CONTINUE
CALL HISTPRIT
GO TO 1000
C
20 EARLIEST TIME ON IAPL.
20 CONTINUE
IUEV=1
INDATP(1)=ITIME(I)
CALL MARRAY
INDATP(2)=ITCRO
ITCRO=ITCRO.AND.77778

```


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```

IF(IICMD .GT. 40140160)62
60 PRINT BI
61 FORMAT(3H SUMM DONEAT HAS INCORRECT WORD COUNT
CALL ZABORT
62 CONTINUE
C DECREMENT *WORDS LOGO TAPE ITP
ITOG(IITP)=ITOG(IITP)-ITCMD
C HEAD INTO INDATP
ITCRU = ITCMD - 2
21 CALL RINAPAY(IIDATP(3),ITCMD)
C UPDATE TIME FOR THIS TAPE.
CALL RUCMD
TAPET(IITP)=ITCMD
C CHECK IF LAST TERMINATES
IF(IICMD .EQ. FTMAX)22,11
22 CALL TENDTAPE
C SET *WORDS LOGO FOR THIS TAPE.
ITOG(IITP)=1
GO TO 11

EMPTY -VSPILL
C HERE TO MERGE MEMORY TO TAPE AND CLEAR EVENTS
C OUT OF LIST MEMORY.
C SCAN TAPES FOR EMPTY UNITS, TRANSFER TAPE1 TO
C SVTIME AND RESET TO TMAX, PUT MIN *WORDS LOGO
C TAPE INDEX IN IMIN
C SET MIN LOGO TO VERY LARGE.
MINGO=LARGE
LEAFYEL
180
C SCANTAPE
30 I=1
SVTIME(I)=TAPET(I)
TAPET(I)=FTMAX
IF(SVTIME(I)-FTMAX)35,31,35
SEE IF EMPTY (ITOG=0)
31 IF(IICMD)37,32,37
32 IF(EMPTY)33,34,34
C HERE EMPTY UNIT AFTER FIRST
33 MINGO=LARGE
IMIN=I
GO TO 17
C FIRSTSTEP=HERE FIRST EMPTY FOUND
34 CONTINUE
MSCU=1
EMPTY=1
GO TO 37
C NOTMAX=HERE TAPE IS NONEMPTY
35 IF(IICMD)-MINGO)36,37,37
C HERE CURRENT TAPE IS MINIMUM
36 IMIN=I
MINGO=ITOG(I)
C CONTSCAN=LOGO UNTIL ALL TAPES SCANNED
37 IF(1-10130)38,38
C RE-ACTIVATE TAPE OF MINIMUM *WORDS LOGO FOR MERGE.
38 I=IMIN

```

```

TAPEF(1)=SWTIME(1)
SWTIME(1)=FTMAX
MENGSM=1
ITP=MGOUT
ACCOUNT = ACCOUNT + 1
PRINT 938,ACCOUNT,MIN,ITP
938 FORMAT(12H EYSPILL NO.,15,10H FROM FILE,13,8H TO FILE,13)
C
WRITE STATUS
MYIDENT = THSCHATCH
CALL SETWRITE
COPY INDATA TO ISVDAT TO SAVE WHILE MERGE.
UC 4J 1=1,NDINDU
4J ISVDAT(1)=INDATP(1)
UC TO 1000
C
CONTROL RETURNS HERE (IN EYSPILL) WHEN MERGE
IS COMPLETED. RESTORE TAPETINES
C
5. CONTINUE
NREVCIT=NCITW=0
IF (NREGSW) 52,51,51
51 CALL ZMORT
COPY SAVED TIMES TO RESTORE
52 CONTINUE
UC 53 1=1,1
53 TAPEF(1)=SWTIME(1)
RESTORE INDATA TO STATE BEFORE SPILL.
UC 54 1=1,NDINDU
54 INDATA(1)=ISVDAT(1)
TERMINATE OUTPUT TAPE AND PUT IN READ STATUS.
ITP=MGOUT
TACHU=FTMAX
CALL WPCRD
CALL TERM TAPE
PUT IN READ STATUS
MYIDENT = THSCHATCH
CALL SETREAD
CALL RD=CRD
TAPEF(1)=TWOCHU
MENGSM=0
RETURN
END

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171000
172000
173000
174000
175000
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207000
208000
209000
210000

5.4TS D0NEXT

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EO

PAGE NO.

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IDENT D0NEXT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

00615
J0035
00403

J1746
00001
00001
00002
00001
00001
00002
54731
00025
00002
00002

D0NEXT
EVSPIII

ESTOK
ITP
TWRUJ
EVENT
MONDAT
MYIDENT
TIME
19501
EVINDA
CONST
NEVTOT

EXTERNAL SYMBOLS

THEND.
PDDICT.
UPDIR
ZARCKT
SQUELZE
RETLN
WARRAY
EVUNPK
KLAUN
KLAUN
CLAUM
REFUEL
ESEC
SSTAT
AATTRIT
LATRIT
TERMSHO
ADAMAGE
ENAREA
LRARE
HABCT
ALAUN
OLAUN
RECOVERY
CHANGALT
AREADAD
RECEK
NAVCHL
NAVATH
ENDGAME
MONPRIN
AIST#411
HONCKOJ
HONCKOJ
TERMTAPE
SETWRITE
HONCKOJ
SETHEAD
STM.

5.4TS

UCWEAT

UNSI 40L.

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EU

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514.5

1930

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2

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2

X00017	AAIT-IT	0J224
X00026	ALAIN	0J292
X00032	APRQMU	00276
X00025	HAGRT	00251
X00022	HDMRGE	00235
P00572	MEGIN	0J573
X00012	HLAIN	00205
X00031	CHANGALY	00273
X00013	CLAWT	00210
X00071	CNRTH	00475
C45071	COLAP	
P00600	CUNL	00513
E-00005	CRFNT	0J323
P01001	UICT	00037
X00027	DLAIN	0J522
P00035	DCNEAT	00285
X00036	ENUGAME	0J316
P00574	ENDTAS	0J090
X00014	EMARCA	0J251
P00014	ESEC	0J210
X00043	ESCPILL	00473
C00001	EVIT-SE	
X00010	EYVNRK	0J134
P00010	FALT	00575
P00015	FCMAYL	00503
C00001	FTAKK	00127
C00001	FUTIME	00462
P00351	G600000	0J465
P00503	G600001	00471
X00040	HISTARIT	0J323
P00601	I	0J463
		0J462
		0J501
P00602	IE4PTV	00411
P00603	IGCTC	0J106
P00003	ILSH	0J145
P00604	IMLY	0J435
C00007	INDAIP	0J166
		0J515
C00009	IMEV	0J147
C00004	IMEVA	0J070
C00001	INDF	0J133
P00572	INITIAL	0J140
C00572	ICUTAP	
P00605	IS	0J137
Call207	ISVOUT	0J510
P00606	ISX	0J165
C00000	ITIME	0J142
Call700	ITIMEK	0J331

00476	00500	00501	00502	00503	00504	00505	00506	00507	00508	00509	00510	00511	00512	00513	00514	00515	00516	00517	00518	00519	00520	00521	00522	00523	00524	00525	00526	00527	00528	00529	00530	00531	00532	00533	00534	00535	00536	00537	00538	00539	00540	00541	00542	00543	00544	00545	00546	00547	00548	00549	00550	00551	00552	00553	00554	00555	00556	00557	00558	00559	00560	00561	00562	00563	00564	00565	00566	00567	00568	00569	00570	00571	00572	00573	00574	00575	00576	00577	00578	00579	00580	00581	00582	00583	00584	00585	00586	00587	00588	00589	00590	00591	00592	00593	00594	00595	00596	00597	00598	00599	00600	00601	00602	00603	00604	00605	00606	00607	00608	00609	00610	00611	00612	00613	00614	00615	00616	00617	00618	00619	00620	00621	00622	00623	00624	00625	00626	00627	00628	00629	00630	00631	00632	00633	00634	00635	00636	00637	00638	00639	00640	00641	00642	00643	00644	00645	00646	00647	00648	00649	00650	00651	00652	00653	00654	00655	00656	00657	00658	00659	00660	00661	00662	00663	00664	00665	00666	00667	00668	00669	00670	00671	00672	00673	00674	00675	00676	00677	00678	00679	00680	00681	00682	00683	00684	00685	00686	00687	00688	00689	00690	00691	00692	00693	00694	00695	00696	00697	00698	00699	00700	00701	00702	00703	00704	00705	00706	00707	00708	00709	00710	00711	00712	00713	00714	00715	00716	00717	00718	00719	00720	00721	00722	00723	00724	00725	00726	00727	00728	00729	00730	00731	00732	00733	00734	00735	00736	00737	00738	00739	00740	00741	00742	00743	00744	00745	00746	00747	00748	00749	00750	00751	00752	00753	00754	00755	00756	00757	00758	00759	00760	00761	00762	00763	00764	00765	00766	00767	00768	00769	00770	00771	00772	00773	00774	00775	00776	00777	00778	00779	00780	00781	00782	00783	00784	00785	00786	00787	00788	00789	00790	00791	00792	00793	00794	00795	00796	00797	00798	00799	00800	00801	00802	00803	00804	00805	00806	00807	00808	00809	00810	00811	00812	00813	00814	00815	00816	00817	00818	00819	00820	00821	00822	00823	00824	00825	00826	00827	00828	00829	00830	00831	00832	00833	00834	00835	00836	00837	00838	00839	00840	00841	00842	00843	00844	00845	00846	00847	00848	00849	00850	00851	00852	00853	00854	00855	00856	00857	00858	00859	00860	00861	00862	00863	00864	00865	00866	00867	00868	00869	00870	00871	00872	00873	00874	00875	00876	00877	00878	00879	00880	00881	00882	00883	00884	00885	00886	00887	00888	00889	00890	00891	00892	00893	00894	00895	00896	00897	00898	00899	00900	00901	00902	00903	00904	00905	00906	00907
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S-4TS	UCNEXT	01/03/72	CU	PAOE NO.	8
G 1734	17340	00132	00134	00401	03425
P00607	17340	00443	00451	00402	03425
C00000	17340	00133	00342	00302	00305
		00125	00131	00355	00371
		00401	00466	00504	00504
C00000	17340	00335	00337		
P00610	17340	00148	00151		
P00116	17340	00105	00112		
P00052	17340	00050			
P00041	17340	00140			
P00202	17340	00173			
P00205	17340	00173			
P00210	17340	00174			
P00213	17340	00175			
P00216	17340	00176			
P00221	17340	00177			
P00224	17340	00177			
P00227	17340	00200			
P00232	17340	00201			
P00235	17340	00201			
P00121	17340	00115	00402		
P00251	17340	00242			
P00254	17340	00242			
P00257	17340	00243			
P00262	17340	00244			
P00264	17340	00245			
P00270	17340	00245			
P00273	17340	00246			
P00276	17340	00247			
P00301	17340	00250			
P00304	17340	00250			
P00124	17340	00122			
P00311	17340	00311			
P00316	17340	00311			
P00321	17340	00312			
P00135	17340				
P00141	17340	00122	00215	00237	00253
P00323	17340	00207	00267	00237	00253
		00261	00264	00306	00320
				00315	
P00171	17340	00107			
P00326	17340	00103			
P00054	17340	00103			
P00240	17340	00170			
P00307	17340	00170			
P00363	17340	00170			
P00176	17340	00170			
P00413	17340	00170			
P00062	17340	00170			
P00424	17340	00170			
P00430	17340	00170			
P00434	17340	00170			
P00437	17340	00170			
P00442	17340	00170			
P00447	17340	00170			

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P00453 .37	00426	00436	00441	00445	00446		
P00456 .38	00454						
P00519 .40							
P00084 .4							
P00521 .50	00061						
P00066 .5							
P00529 .51	00524						
P00527 .52	00524						
P00532 .53							
P00542 .54							
P00345 .60							
P00073 .6							
P00355 .62	00344						
P00075 .7	00072						
P00106 .8							
P00113 .9							
P00576 .ENASER.	00163	00164					
P00033 .100090	00503						
P00034 .100001	00555						
P00005 .01	00350						
P00015 .030	00474						
P00611 J	00342	00053	00056	00062	00324	00331	
P00612 JSA	00166						
CU0000 LARGE	00407	00433	00433				
XU0020 LAT-11	00227						
CU0001 LINK 4	00117						
XU0024 LMAHEA	00254						
CU1707 MENTIM	00120						
CU0006 MEGSM	00121						
P00613 MEGUT	00124	00464	00523	00523	00566		
P00614 MINGO	00410	00465	00545				
XU0011 PLAIN	00202	00434	00444				
XU0037 MONPRIN	00321						
CU0000 MONSW							
CU0000 MYIDONT	00504	00556	00556				
XU0035 NAVATH	00313						
XU0034 NAVCAL	00304						
CU0000 NRCCELL							
CU0000 NREVTOT	00101	00102	00522				
CU0000 NRIIND							
P00004 NCCONT	00467	00470					
CU0001 NCTR	00521	00522					
CU0004 NDLND	00342	00343					
CU0005 NEATEV	00364	00064	00071	00511	00536	00104	00111
CU0003 NNCORUS		00036					00116
XU0002 UNRDICT.	00320						00116
XU0050 UNSINGL.	00570						
XU0042 RUARWAY	00363						
XU0041 HD4CRD	00333	00561					
XU0033 HECKER	00301						
XU0030 RECOVERY	00270						
XU0014 REFUEL	00213						
XU0006 RETLM	00377						
CU0000 SCALET							

5.4TS

2x3x3x3

000001	SCALES	000001	SCALES
000006	SEIRAO	000006	SEIRAO
000046	SFIMITE	000046	SFIMITE
000055	SQUEZE	000055	SQUEZE
000010	STAL	000010	STAL
000031	STATUS	000031	STATUS
000047	SYN	000047	SYN
000022	SYNVE	000022	SYNVE
000010	TAPEI	000010	TAPEI
000021	TEAMTAPE	000021	TEAMTAPE
000001	THENU	000001	THENU
000000	TIME	000000	TIME
000017	TIMEA	000017	TIMEA
000002	TIMEK	000002	TIMEK
000020	TSU00002	000020	TSU00002
000050	TSU00004	000050	TSU00004
000003	UPIN	000003	UPIN
000007	WABRAY	000007	WABRAY
000045	WABRAY	000045	WABRAY
000045	WU00001	000045	WU00001
000015	WU00002	000015	WU00002
000032	WU00003	000032	WU00003
000052	WU00004	000052	WU00004
000004	ZABCI	000004	ZABCI
000026	ZABCI	000026	ZABCI
000004	ZABCI	000004	ZABCI

00557
00505
00175
00221
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00416
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00455
00517
00534
00544
00073

00472
00421
00372

00553
00501

00045

00370
00106

00047	00047	00056	00057	00114	00114
000373	000373	000550	000551	00563	00563

57500

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PAGE NO.

2

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SUMMUTIME ENDGAME
CUSHH ENUGAME 21SEP71 *****
C PRINTS MAXIMUM GAME TIME, CALLS FOR TERMINATION OF HISTORY TAPE,
C CALLS FOR PRINTING OF SUMMARIES, AND STOPS
COMMON/ITP/ITP
COMMON/MYIDENT/MYIDENT
CUSF RECV 28APR71 *****
COMMON/RECV/RECV(5,4,2),TOPREC(5,4,2),NMORE(50,4,2),
      NRES(50,4,2),LSMPT
CEND RECV *****
CUSE NAMES 28APR71 *****
COMMON/NAMES/NAMES(2),NAMCLS(15),NAMTYPE(25)
CEND NAMES *****
COMMON/TIME/TIME,FUTIME
COMMON/TMGRD/TMGRD
CUSE WARHEAD 28APR71 *****
COMMON/WARHEAD/YIELD(50),POW(50),CEP(50)
CEND WARHEAD *****
CUSE FRKPRNT 28APR71 *****
COMMON/FRKPRNT/ITYPECUM(15),INBUETYP(15),INBUCL(15),INDEGTY(250)
CEND FRKPRNT *****
C CURRENT GAME TIME IS NOW MAXIMUM GAME TIME
TIME = TIME + 24.
PRINT 10,TIME
100 FORMAT(9,4,10H GAME ENDS)
CALL SSSTAT
C CALL FOR SUMMARY OF STATUS ARRAY
3 CALL STATSUM
C CALL FOR BALLISTIC MISSILE STATUS SUMMARY
CALL RMDSSTAT
CALL AGZSUM
CALL PAGEGRP
C CALL FOR TERMINATION OF HISTORY TAPE
ITP=5
ITMGRD=4LAST
CALL MYMGRD
CALL WARHEAD(IRECV,400)
CALL TMTAPE
MYIDENT = NM HISTAPE
CALL SETHEAD
CALL SKIPFILE(ITP)
30 HUFFER OUT(ITP,1)(MYTYPECUM(1),INDEGTY(250))
31 IF(UNIT,ITP) 31,32,33,33
33 PRINT 34
34 FORMAT(30H ENDS IN WRITING HISTP ARRAYS)
32 CONTINUE
41 HUFFER OUT(ITP,1)(NAMES(10),NAMTYPE(250))
43 PRINT 34
42 CONTINUE
35 HUFFER OUT(ITP,1)(YIELD(1),YIELD(50))
37 PRINT 34
36 CONTINUE
DC 12 A=1,2

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5.4TS	ENDGAME	01/03/72	20	PAGE NO.	3
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PROGRAM LENGTH	ENTRY POINTS	FLCGR NAMES	ENDGRPH
170	MYIDENI	RECOV	NAMES
		TIME	TIME
		FWCRU	NAMEEND
		HRKRAI	

EXTERNAL SYMBOLS

THEN .
ANDSTOPS
MODIFI.
STATI
STATSUR
MODSTAT
AGZSUA
PAGEEND
WAGZKI
WAGZNY
TEMPAPE
SETREND
SKIOPILL
WAGZUNI
STM.
MFO.
UNSI.MOL.

5.415

ENDGAME

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4

X00007 AGZSU4	00114						
P00377 HEU4.	00377						
X00020 HFC.	00144						
X00006 HNUSTAI	00112						
C00144 CEP4	00103						
P00326 CNVRT1.	00106						
P00003 CNRT1.	00372						
P00001 UICR.	00136						
	00211						
	00321						
P00070 ENDGAME	00070						
P00400 ENDING.	00373						
P00003 EXIT.	00400						
P00003 FC4401.	00122						
C00001 F0111E							
P00106 G6J0000.	00377						
P00162 G6J0002.	00154						
P00202 G6J0004.	00174						
P00222 G6J0006.	00214						
P00247 G6J0007.	00225						
P00276 G6J0008.	00255						
P00314 G6J0011.	00300						
P00322 G6J0012.	00314						
P00405 HTIME	00376						
P00406 I	00235						
P00327 INJ0002.	00252						
C00030 INJ0003.	00205						
C00036 INJ0004.	00149						
C00055 INJ0005.	00173						
P00377 INJ0006.	00130						
C00000 INJ0007.	00120						
C00000 INJ0008.	00202						
C00000 INJ0009.	00123						
C00000 INJ0010.	00254						
C00000 INJ0011.	00254						
C00000 INJ0012.	00152						
C00000 INJ0013.	00152						
C00000 INJ0014.	00153						
C00000 INJ0015.	00212						
C00000 INJ0016.	00212						
C00000 INJ0017.	00213						
C00000 INJ0018.	00172						
C00000 INJ0019.	00172						
C00000 INJ0020.	00173						
C00000 INJ0021.	00162						
C00000 INJ0022.	00162						
C00000 INJ0023.	00162						
C00000 INJ0024.	00162						
C00000 INJ0025.	00162						
C00000 INJ0026.	00162						
C00000 INJ0027.	00162						
C00000 INJ0028.	00162						
C00000 INJ0029.	00162						
C00000 INJ0030.	00162						
C00000 INJ0031.	00162						
C00000 INJ0032.	00162						
C00000 INJ0033.	00162						
C00000 INJ0034.	00162						
C00000 INJ0035.	00162						
C00000 INJ0036.	00162						
C00000 INJ0037.	00162						
C00000 INJ0038.	00162						
C00000 INJ0039.	00162						
C00000 INJ0040.	00162						
C00000 INJ0041.	00162						
C00000 INJ0042.	00162						
C00000 INJ0043.	00162						
C00000 INJ0044.	00162						
C00000 INJ0045.	00162						
C00000 INJ0046.	00162						
C00000 INJ0047.	00162						
C00000 INJ0048.	00162						
C00000 INJ0049.	00162						
C00000 INJ0050.	00162						
C00000 INJ0051.	00162						
C00000 INJ0052.	00162						
C00000 INJ0053.	00162						
C00000 INJ0054.	00162						
C00000 INJ0055.	00162						
C00000 INJ0056.	00162						
C00000 INJ0057.	00162						
C00000 INJ0058.	00162						
C00000 INJ0059.	00162						
C00000 INJ0060.	00162						
C00000 INJ0061.	00162						
C00000 INJ0062.	00162						
C00000 INJ0063.	00162						
C00000 INJ0064.	00162						
C00000 INJ0065.	00162						
C00000 INJ0066.	00162						
C00000 INJ0067.	00162						
C00000 INJ0068.	00162						
C00000 INJ0069.	00162						
C00000 INJ0070.	00162						
C00000 INJ0071.	00162						
C00000 INJ0072.	00162						
C00000 INJ0073.	00162						
C00000 INJ0074.	00162						
C00000 INJ0075.	00162						
C00000 INJ0076.	00162						
C00000 INJ0077.	00162						
C00000 INJ0078.	00162						
C00000 INJ0079.	00162						
C00000 INJ0080.	00162						
C00000 INJ0081.	00162						
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C00000 INJ0098.	00162						
C00000 INJ0099.	00162						
C00000 INJ0100.	00162						
C00000 INJ0101.	00162						
C00000 INJ0102.	00162						
C00000 INJ0103.	00162						
C00000 INJ0104.	00162						
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C00000 INJ0115.	00162						
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C00000 INJ0123.	00162						
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C00000 INJ0125.	00162						
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C00000 INJ0159.	00162						
C00000 INJ0160.	00162						
C00000 INJ0161.	00162						
C00000 INJ0162.	00162						
C00000 INJ0163.	00162						
C00000 INJ0164.	00162						

SATS ENDNAME

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P00022	00371	00250				
P00050	00372	00250				
P00013	00373	00250				
P00007	J	00250				
P00010	K	00250				
C00100	LSHIFT	00250				
C00000	MYINENT	00250				
C00002	NAMECLS	00250				
C00003	NAMESTOF	00250				
C00021	NAME TYPE	00250				
C00017	NHUE TYPE	00250				
C01000	NAME	00250				
C02260	NAME	00250				
C00000	NAME	00250				
P00331	P00371	00250				
P00347	P00371	00250				
P00363	P00371	00250				
P00011	PAGESEP	00250				
C00002	P000	00250				
X00003	UNADICL	00250				
X00016	UNADICL	00250				
X00022	UNADICL	00250				
X00021	UNADICL	00250				
X00014	SETREAD	00250				
X00015	SETREAD	00250				
X00004	STAT	00250				
X00007	STAT	00250				
X00017	STAT	00250				
X00013	TEMP	00250				
X00001	TEMP	00250				
C00000	TEMP	00250				
C00021	TEMP	00250				
P00337	UPC001	00250				
P00354	UPC001	00250				
P00370	UPC002	00250				
X00012	UPC002	00250				
X00011	UPC002	00250				
P00225	UPC001	00250				
P00237	UPC002	00250				
P00252	UPC003	00250				
P00265	UPC004	00250				
C00000	UPC004	00250				
00134	UPC005	00250				

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SUBROUTINE ERAREA
  ERAREA 15MAY71 *****
  RECORDS THE ARRIVAL OF A FULL TANKER AT A REFUELING AREA
  COMMON/DATTA/ISIZE
  CUSE
  EDATAH 4JAN71 *****
  COMMON/EDATA/SIDEC,IBASE,INDM,JN1AR,NW1YPC,DG6Z,DG7C,DH6ZC,11YPC,
  1ICLASS,1HREG,1ALENG,1INCNG,INDHIC,NOLCO,1ALTCH,NCMC,PRNAV,SPC(2),
  21WTC,JMTC,XA(2),NALTC,FABORTC,TINC(18),INDPC(8),INDE(16),
  3 1WTPC(12),XDWZC(12),YDWZC(12),ZDWZC(12),S(6),CUTDATA(32),11S,DE,
  4 1HASE,INDV,1J1AR,NW1YPC,DG6Z,DG7C,DH6ZC,11YPC,1ICLASS,1HREG,1ALENG,
  5 1INCNG,INDHIC,NOLCO,1ALTCH,NCMC,PRNAV,SPARE(2),1J1,EXTMA(2),NALTC,
  6 FABORTC,TINC(80),INDP(80),INDE(80),1WTPC(12),XDWZC(12),YDWZC(12),
  7 ZDWZC(12),INDATA(32)
  EQUIVALENCE (SIDEC,CUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (INPLAN,NALTC), (IMHT,IMT), (MHT,JMT)
  TYPE INTEGER DUG,DUGY,DH6Z,XDWZ,YDWZ,ZDWZ
  TYPE INTEGER DWAC,1YGC,DH6ZC,XDWZC,YDWZC,ZDWZC
  TYPE INTEGER CUTDATA,SIDEC
  EDATAH *****
  COMMON/EPSN/EPSN
  DATAPSN=1.0E-6
  COMMON/REFUEL/NFTANK(100),NETANK(100)
  COMMON/TIME/TIME,FUTIME
  CEND

1 CONTINUE
C 10000 CALL TO ERAREA
C 21000 CALL HIST(11,1)
C 30000 GET REFUELING AREA NUMBER
C 40000 INDRA=INDP(IHT)
C 50000 INZONE = INDRA
C 60000 INCREASE NUMBER OF FULL TANKERS IN THAT REFUELING AREA
C 70000 NFTANK(INDRA)=NFTANK(INDRA) + 50
C 80000 ADVANCE HISTORY TABLE POINTER TO NEXT TANKER EVENT
C 90000 1HT = 1HT - 1
C 10000 TEST IF TANKER ABORT (TIME IS PRIOR TO NEXT EVENT TIME
C 11000 FUTIME=TIME+TINC(IHT)
C 12000 IF(TANKORT.GE.FUTIME+EPSN) 7,6
C 13000 SFT FUTURE EVENT EXECUTION TIME TO EARLY DEPARTURE TIME
C 14000 6 FUTIME=TANKORT
C 15000 7 PLANT LEAVE REFUELING AREA EVENT
C 16000 CALL PLANTS(12,ISIZE)
C 17000 END

```

5.41S ERAREA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ERAREA

DATA
EDATA
EPSN
REFUEL
TIME

EXTERNAL SYMBOLS

UNQDICT.
HIST
PLANTS

IDENT

00050
00003
00001
01200
00001
00310
00002

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ERAE

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CO0472	R						
PU0042	HEGIN.	00042					
CO0505	DGA						
CO0005	DGA						
CO0506	DGY						
CO0006	DGY						
CO0507	DMON						
CO0017	DMON						
PO0001	DICT.	00005	00010	00037			
PO0043	ENDING.	00006	00041				
CO0010	EPSH	00003	00031	00031			
PO0003	ERAE	00003					
PO0000	EXIT.	00043					
CO0526	EXTR.						
CO0001	FUTIME	00025	00026	00030	00030	00035	00035
X00002	HIST	00027					
CO0513	IALERT						
CO0013	IALERT						
CO0517	IALT						
CO0017	IALT						
CO0001	INASE						
CO0511	ICLASS						
CO0011	ICLASS						
CO0524	INT	00012	00012	00021	00022	00024	00024
CO0024	INT						
CO0501	INRASE						
CO0500	INRATA						
CO0772	INDE						
CO0272	INDEC						
CO0002	INDM						
CO0652	INDP	00013					
CO0152	INOPG						
PO0047	INDRA	00014	00016				
CO0502	INDV						
PO0042	INITIAL.	00005					
CO0503	INTAR						
CO0514	INZONE	00014	00015				
CO0014	INZONG						
CO0512	IREG						
CO0012	IREG						
CO0000	ISIZE						
CO0510	ITFE	00040					
CO0010	ITYPC						
CO0112	ITYP						
CO0412	ITYPG						
PO0007	.1						
F00016	.2						
PO0021	.3						
PO0027	.4						
PO0034	.6						
PO0036	.7						
CO0003	JNTAR	00032	00033				
CO0525	JNT						
CO0025	JNTC						

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LRAREA

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EU

U

PAGE NO.

CU0524 MHI
CU0525 MWT
CU0530 NALT
CU0530 NALT
CU0520 NCM
CU0520 NCM
CU0515 NMHI
CU0515 NMHI
CU0516 NDLG
CU0516 NDLG
CU0514 NEIANK
CU0500 NFIANK
CU0520 NPLAN
CU0504 NWTYP
CU0504 NWTYP
CU0500 CUTOATA
CU0521 PKNAV
CU0521 PKNAV
CU0503 PLANTS
CU0500 SIUE
CU0500 SIUE
CU0522 SPARE
CU0522 SPC
CU0531 TARCHT
CU0531 TARCHT
CU0500 TIME
CU0532 TINC
CU0532 TINC
CU0526 XDGT
CU0526 XDGT
CU0526 XI
CU0542 YDGT
CU0542 YDGT
CU0556 ZDGT
CU0556 ZDGT
CU0556 ZDGT

CU0517 CU0517 00040

CU0536 CU0536 00004

CU0527 CU0527 00034 00034

CU0523 CU0523 00023

00132 SYM-CLS

```

SUBROUTINE ERRCL(IJUN71)
  ERKCL  IJUN71
  PRINTS ERROR MESSAGE FOR PLANT ON UNSQUEEZ AND CALLS ABORT
  C      ERKCH TYPE 10 - NO LIST MEMORY AVAILABLE AFTER EVSPILL (PLANT)
  C      ERKCH TYPE 20 - NO LIST MEMORY AVAILABLE AFTER EVSPILL (UNUSQUEEZ)
  C      ERKCH TYPE 21 - FUTURE EARLIER THAN TIME (PLANT)
  C      ERKCH TYPE 11 - NO LIST MEMORY AVAILABLE AFTER EVSPILL
  C      PRINT I,IJUN71
  C      I FORMAT(26H PLANT ON UNSQUEEZ ERROR *I3)
  C      CALL ZABORT
  C      END

```

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1000
47000
2000
3000
4000
5000
7000
9000
10000
11000
12000

```

2

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ERRCL

IDENT

00066
00013

5.4TS ERRCL

PROGRAM LENGTH
ENTRY PCINTS
EXTERNAL SYMBOLS

ERRCL

THEND.
ORDDICT.
ZABORT
STH.
ONSINGL.

SATS

EHRCL

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3

PU0034 MESIN.
 PU0033 CNVRTI.
 PU0003 CRFMT.
 PU0001 DICT.
 PU0051 ENDING.
 PU0013 ERMCL.
 PU0000 EXIT.
 PU0003 FCHMAT.
 PU0023 FPU00C1.
 PU0005 GETPL.
 PU0055 GETPU.
 PU0027 GGU0000.
 PU0034 INITIAL.
 PU0003 ITP.
 PU0003 *1.
 PU0050 PFU0002.
 XU0002 UADJICI.
 XU0005 UNSINGL.
 XU0004 STM.
 XU0001 TEND.
 XU0003 ZARCKT
 00025 SYMBCL5

00050
 00024
 00027
 00015
 00016
 00013
 00054
 00046
 00041
 00044
 00017
 00016
 00023
 00022
 00045
 00000
 00032
 00020
 00025
 00021

JU0056 JU0062

JU0021 JU0031

JU0026 JU0030

JU0034 JU0035

JU0037 JU0040

JU0035 JU0036

JU0047

JU0061

JU0014


```

7 CALL NEXTVNT
81 RETURN
C 30 UNPACK IDPEN,JMAX
    IDPEN=IDP(IHT)/LSHIFT
    IS = SIDE
C 31 RECDN DE-PENETRATION
    CALL HIST(5,3)
    IHTO=1 $ JHTO=0
C 32 INZNGOIS
    FIND MOST DISTANT AVAILABLE BASE
    IR=0
    DO 100 I=1,JMAX
        K=JMAX-I+1
        IIRASE = IRECOV(IDPEN,K,IS)
        IIR=IGET(ISTAT,IIRASE,STATUS)
        IF(IIR)31,100
    31 IF(IIR)33,32
C 32 MOST DISTANT LIVE BASE
    32 IIR=K
    33 IF(INHORE(IDPEN,K,IS),GT,0) 34,100
C 34 MOST DISTANT AVAILABLE BASE
    34 IIR=K
    GO TO 35
100 CONTINUE
C 35 DO COMPLETED-USE SATURATED BASE OR ABORT
    IF(IIR)35,36
C 36 NO LIVE BASE
    36 INDP=IDPEN
    IR=JMAX $ GO TO 37
    35 INDP=IDPEN*IIRLSHIFT
    37 FUTURE = TIME * TCFEC(IDPEN,IR,IS)
    38 WRES(IDPEN,IR,IS) = WRES(IDPEN,IR,IS) -
    38 IF(TABORT-FUTURE-EPSN)0,40,39
C 39 SET EVENT TAPE TO ZERO -- 16 MEANS RECOVERY AT HOME BASE
    39 INDEC=0
    CALL PLANTS(16,12)
    RETURN
C 40 ABORT PRIOR TO RECOVERY
    FUTURE=TAHOUT
    CALL PLANTS(13,12)
    RETURN
END

```

5.4TS

ESEC

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ESEC

EDATA
HISTOUT
HISREC
RECOV
TIME
ZONES
KEYWORDS
19501
EPSN

EXTERNAL SYMBOLS

QUODICT.
-IST
NEXTENT
IGET
PLANS

IDENT

ESEC

00300
00003
01200
00310
00003
03101
00002
00475
00024
54731
00001

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ED

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P00275	IK	00121			
P00007	.1	00122	00132		
P00140	.100	00014	00015		
P00016	.15	00015			
P00023	.2	00122			
P00034	.21	00034			
P00043	.3	00122			
P00055	.30	00124			
P00123	.31	00137	00143		
P00125	.32	00151			
P00130	.33				
P00134	.34				
P00152	.35				
P00144	.36				
P00156	.37				
P00164	.38				
P00170	.39				
P00045	.4				
P00177	.40	00167			
P00036	.5	00035			
P00051	.7	00044			
P00054	.81	00161	00061	00141	00146
P00276	JMAX				
C00003	JN1AM				
C00525	JNT				
C00025	JNTC				
P00277	K	00077	00125	00134	00226
C00000	KEYARAY	00110			
C00374	KILLZ				
C00002	LAZNE	00031			
C00001	LINKM				
C00100	LSHPT	00057	00060	00062	00153
C00473	MAXZONE				
C00524	MHT				
C00525	MHT				
C00530	MALT				
C00030	NALIC				
C00000	NACELL				
C00022	NACONE	00043			
C00520	NCM				
C00020	NC4C				
C00515	NOMI	00025	00026	00040	00041
C00015	NOMIC	00026	00041		
C00516	NOLC				
C00016	NOLCC				
X00003	NORLEVT	00051			
C00000	NHISTCUT				
C00140	NKORE	00131	00024	00027	00042
C00275	NPNZ	00024			
C00530	NPLAN				
C00260	NRES	00102	00162	00163	
C00504	NRTYP				
C00004	NRTYPC				
C00000	CUFDATA				

SATS	ESEC	01/03/72	ED	PLSE NO.	6
C00521	PRNAV				
C00021	PRNAV				
X00005	PLANTS				
X00001	08-01CT.				
P00211	HELCON..	00074	00175	00204	00255
C00500	SIDE	00053			
C00000	SIDEC	00050			
C00522	SPARE	00066			
C00022	SPD				
C15531	STATUS				
C00531	TAMCMT	00177	00177		
C00031	TAMCMTG	00164			
C00000	TIME	00156			
C00532	TINC				
C00032	TINCC				
C00620	TREC	00150			
P00141	TS-0001.	00100			
C00000	TSTAT	00105			
P00214	UP00003.	00117			
P00225	UP00004.	00070			
P00235	UP00005.	00111			
P00246	UP00006.	00065			
P00106	W500001.	00103			
C01126	XD02	00127	00136	00150	
C00426	XD02C	00142			
C00026	XX				
C01142	YD02				
C00442	YD02C				
C00176	ZCCPCT				
C00077	ZDEFPCT				
C01156	ZD02				
C00456	ZD02C				
00214	SYMBOLS				

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SUMROUTINE EYPACK
CSURH EYPACK 22JUN71 *****
C      PACK ICUTD INTO ICUTOP
COMMON/ESTOR/SCALET,SCALETI,THAX,NORDS,NDIM,NEATEV,MERUS,
1  INATP(320),ICUTOP(320),ISVDAT(320),MENTIM,FAPEY(10),SVTIME(10)
2  ,LICUC(10)
COMMON/EDATA/ICUTD(320),INDATA(320)
COMMON/EPACK/INDFORMC(100)
COMMON/FCHMAT/JFCHMAT(10)
COMMON/MCHDAT/ACHSW
DATA(IASH12=100008)

C      UNPACK FCHMAT, INDEX ARRAY
CALL UNPECH
C      INITIALIZE POINTERS
IUNP = 1
IPK = 1
NMX=INDFORMC(1)*1
DC 4 I=2,NMX
J=INDFORMC(I)
IND=JFCHMAT(J)
IF(I=0-1)9.1,2
C      TRANSFER SIMPLE VARIABLE
1 ICUTOP(IPK)=ICUTD(IUNP)
IPK=IPK+1
9 IUNP = IUNP +1
GC IC 4
C      TRANSFER ARRAY
2 ID = 140,AND,777b
IU = I=0,I=SM12
NUSE=ICUTD(IU)
IF(IUNP=NUSE-1)
IR = IPK - IUNP
UC 3 K=IUNP,IE
ICUTOP(IH + K) = ICUTD(K)
3 CONTINUE
IUNP=IUNP+ID
IPK = IPK + NUSE
4 CONTINUE
NCHNUS = IPK - 1
IF(IPK=NDIMD16.0.5)
ARRAY OVERFLOW
5 CALL ZARCHI
6 IF(MONSW)7.8,R
C      PRINT ICUTD AND ICUTOP
7 IWD=IUNP-1
CALL PHCUTDAT(IWD5)
8 RETURN
END

```

S.ATS

EVPACK

01/03/72

EO

0

PAGE NO.

2

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

EVPACK

ESTOR

EDATA

EPAK

FORMAT

MCNDAT

EXTERNAL SYMBOLS

ORQDICT.

UNPFCR

ZABORT

PRGUTDAT

IDENT

EVPACK

00143

00004

01746

01200

00144

00012

00001

5.415

EVPACK

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3

PC0120	HEGIN.	00121				
PC0125	COUNT.	00057				
PC0001	DICT.	00006				
PC0122	ENDING.	00007				
PC0004	EVPACK	00004				
PC0000	EXIT.	00123				
PC0126	1	00017				
PC0127	18	00054				
PC0130	ID	00044				
PC0131	IF	00072				
PC0500	INDATA	00053				
CC0007	INDATP					
CC0000	INUFORMC	00014				
PC0120	INITIAL.	00007				
CC0000	ICUTD	00032				
CC0507	ICUTDP	00034				
PC0132	IPK	00014				
PC0503	IPS412	00046				
CC0207	ISVDAT					
CC1734	ITSGC					
PC0134	IUNP	00046				
PC0135	IWD	00013				
PC0136	IWDS	00026				
PC0031	*1	00113				
PC0042	*2	00027				
PC0067	*3	00030				
PC0075	*4	00041				
PC0105	*5	00104				
PC0107	*6	00111				
PC0112	*7	00110				
PC0117	*8	00127				
PC0037	*9	00003				
PC0124	*NSTIFF.	00123				
PC0137	J	00024				
CC0000	JFCRMAT	00025				
PC0140	K	00055				
CC1707	MEATIM					
CC0006	MEMGSM					
CC0000	MOGSM					
PC0141	NMA	00107				
CC0004	NCLMD	00076				
CC0005	NEATEV	00103				
PC0142	NUSF	00051				
CC0003	NWCRUS	00151				
CC0004	PRCUTMAT	00114				
CC0001	WRNDRIC	00000				
CC0000	SCALET					
CC0001	SCALETI					
CC1722	SYTIME					
CC1710	TAPET					
CC0002	TRAX					
PC0076	TSU0001.	00020				
PC0071	TSU0002.	00057				

5.4TS

EVPACK

XU0002 UNPFCR
PU0021 WSOJCO1.
PU0061 WSOJCO2.
XU0003 ZAPCMT
QU072 SYMCHLS

QU010
QU077
QU073
QU105

QU077

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SUBROUTINE EVUNPK
  CSURH  EVUNPK  22JUN71  *****
  C  UNPACK DATA FROM INUATP INTO INDATA
  C  INU = INDEX OF PACKED FORMAT ARRAY.
  C  COMMON/ESTOR/SCALET1,IMAX,NCRD5,NDIM,NRETEV,NREUS*,
  C  INUATP(320),ISUTUP(320),ISUAT(320),MEMTIM,TAPET(10),SVTIME(10)
  C  *11060(10)
  C  COMMON/EDATA/ICUID(320),INDATA(320)
  C  DATA(IMAX=321)
  C  COMMON/EPACK/INDFORMG(100)
  C  COMMON/FORMAT/JFORMAT(10)
  C  COMMON/MONDAT/MONSW
  C  DATA(MONSW12 = 100000)

  C  UNPACK FORMAT INDEX ARRAY
  C  CALL UNPFCR
  C  INITIALIZE POINTERS
  C  IUNP = 1
  C  IPK = 3
  C  NMAX=INDFORMG(1) + 1
  C  UC % I=2,NHX
  C  J = INDFORMG(1)
  C  IWD=JFORMAT(10)
  C  IF(IWD-119,1,2
  C  IWD = 1000 IF VARIABLE IS NOT USED
  C  INDATA(IUNP) = J
  C  IUNP = IUNP + 1
  C  GO TO 4
  C  IWD = 10=1 IF VARIABLE IS SIMPLE
  C  TRANSFER SIMPLE VARIABLE
  C  I INDATA(IUNP)=INDATP(IPK)
  C  I IUNP=IUNP+1 > IPK=IPK+1
  C  GO TO 4
  C  TRANSFER ARRAY
  C  ID IS THE DIMENSION OF A DIMENSIONED VARIABLE
  C  2 ID=140,AND,77778
  C  ID IS THE INDEX OF THE INDATA *CHO WHICH GIVES THE NUMBER OF
  C  *CHUS ACTUALLY USED(NUSE) FOR THE VARIABLE.
  C  IU = IND/IRSH12
  C  NUSE=INDATA(IU)
  C  IE=IPK*NUSE-1
  C  IR = IUNP - IPK
  C  UC 3 K=IPK,IE
  C  INDATA(IR * K) = INDATA(P(K)
  C  3 CONTINUE
  C  IPK=IE+1
  C  IUNP = IUNP + IU
  C  4 CONTINUE
  C  IF(IUNP=IMAX16,0,5
  C  ARRAY OVERFLOW
  C  5 CALL ZAROKT
  C  6 IF(MONSW17,8,8
  C  PRINT INDATA AND INUATP
  C  7 INDS=IUNP-1
  C  NNCRUS=IPK-1
  C  CALL PHINDAT(IINDS)

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FTN5.5

8 RETURN
END

01/03/12

01000
02000

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5.4TS EVUNPK

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

EVUNPK

ESTCH
EDATA
EPACK
FORMAT
MCNDAT

EXTERNAL SYMBOLS

QADICT.
UNPFCM
ZABORT
PRINOUT

IDENT

00147
00005
01746
01200
00144
00012
00001

EVUNPK

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EO

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5.4TS

EVUNPK

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PO0124	REUIM.	00125							
PO0131	CSUNT.	00064							
PO0001	DICT.	00007							
PO0126	ENDING.	00010							
PO0005	EVUNPK	00005							
PO0000	EXIT.	00127							
PO0132	I	00020							
PO0133	10	00001							
PO0134	ID	00051							
PO0135	IE	00000							
PO0003	IMAX	00105							
CU0500	INDARA	00033							
CU0007	INDATP	00040							
CU0000	INDFORMC	00015							
PO0124	INITIAL.	00010							
CU0000	ISUTD	00015							
CU0507	ISUTOP	00053							
PO0136	IPK	00037							
PO0004	IRSH12	00053							
CU1207	ISVDAT	00053							
CU1734	ITGCG	00114							
PO0137	IU	00027							
PO0140	IUNP	00115							
PO0141	IWO	00031							
PO0142	IWUS	00034							
PO0037	*1	00106							
PO0047	*2	00112							
PO0074	*3	00030							
PO0102	*4	00072							
PO0107	*5	00025							
PO0111	*6	00065							
PO0114	*7	00111							
PO0123	*8	00117							
PO0032	*9	00000							
PO0130	*NSTIFF.	00056							
PO0143	J	00117							
CU0000	JFCRNAT	00120							
PO0144	K	00025							
CU1707	MENTIM	00062							
CU0006	MERSW	00067							
CU0000	MONS*	00111							
PO0145	NMA	00117							
CU0004	NOLMO	00103							
CU0005	NEATEV	00006							
PO0146	NUSE	00057							
CU0003	NEGRUS	00117							
CU0004	PRINDAT	00120							
CU0001	UNINDICT.	00000							
CU0000	SCALET	00000							
CU0001	SCALETI	00000							
CU1722	SVTIME	00000							
CU1710	TAPEI	00000							
CU0002	THAK	00000							

5.415 EVUNPK

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P00103 1500001. 00121
P00076 1500002. 00104
X00002 UNPFCR 00111
P00022 1500001. 00104
P00066 1500002. 00107
X00003 Z483RT 00107
00073 SYMBOLS

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SURROUTINE HIST(14,JM)
  HIST 150CT71
  PRINTS GAME HISTORY, FILLS BLOCKS TO BE WRITTEN ON HISTORY TAPE
  COMMON/AREADAT/INT(20,3),NLR(120),[OVERLAP(20),ARAD
  HCHER 28APH71
  COMMON/HOMHER/PLAT(80),TMDL(80),ABNATE(80),PRAST(80),CEPR(80),
  1 TLINT(80),IFUNCH(80)
  2 HCHER
  HRPNT 28APH71
  COMMON/HKRPNT/JTYPECUM(15),NMLUEYP(15),INDEWCL(15),INDEHGT(250)
  HRPNT
  COMMON/DEFZONE/DEFZONE
  TYPE INTEGER DEFZONE
  EDATAR 4JART1
  COMMON/EDAT/SIDEQ,CUTDATA(1),[SIDE,INDATA(1)]
  1 ICLASS,INREG,TALENT,INZCNC,NMHC,NULG,LALC,NMHC,PKNAYS,SPC(2),
  2 IATC,INTC,XK(2),NALT,TARGETC,TINC(80),INDPC(80),INDEF(8),
  3 IATPC(12),XDGC(12),YDGC(12),ZDGC(12),B(6),CUTDATA(32),SIDE,
  4 INPAC,INOV,INTAR,NWTP,UGX,UGY,DRGB,ITYPE,ICLASS,INREG,TALENT,
  5 INZCNC,NMHC,NULG,LALC,NMHC,PKNAV,SPARE(2),IMTJMT,TEXTMA(2),NALT,
  6 TARGETC,TINC(80),LADP(80),INDE(80),ITYP(12),XD-Z(12),YDGC(12),
  7 ZDGC(12),INDATA(32)
  EQUIVALENCE (SIDEQ,CUTDATA(1)),[SIDE,INDATA(1)]
  EQUIVALENCE (INPLAN,NALT),[IMTJMT]
  TYPE INTEGER DRGB,UGX,UGY,DRGB,XD-Z,YDGC,ZDGC
  TYPE INTEGER CUTDATA,SIDE,SIDEQ
  EDATAB
  DIMENSION WPNLST(18),LAUNLIST(18)
  EQUIVALENCE (NPPMS,INDATA(13)),[INTARG,INDATA(14)],
  1 (WPNLST(1),INDATA(15)),[LAUNLIST(1),INDATA(33)],
  1 (MLIST,INDATA(5))
  DIMENSION MLIST(270)
  EQUIVALENCE (NPPMS,
  1 (AALM,
  2 (TGF,
  EQUIVALENCE (NMKY,INDATA(8))
  TYPE INTEGER WPNLST,IAHLIST
  TYPE INTEGER XLIST,YLIST,ZLIST
  TYPE INTEGER TAIM
  COMMON/GRND/IAUX,IAUY
  COMMON/HISTABM/LAREAX,NAL,NWHSX,NDEI,NAREA,NTERN
  EQUIVALENCE (NPE,NWHSX)
  COMMON/HISTAL/NLC,TCFLT,IM
  COMMON/HISTOUT/NSIDE,NINBASE,NINOV,NINTAR,NWTP,NTIME,NEVENT,
  1 NPLACE,NTYPE,NICLASS,NINREG,NIALERT,NDOU,NINZCNC,NNUCCIS,NIALT,
  2 NNC,NASHTYPE,NHCODE,DUMMY(5),NMHT,HDELAY,TINC(40),INDPN(40),
  3 INDE(40),NWTPEN(6),NHISTOUT(290)
  EQUIVALENCE (NSIDE,
  1 NHISTOUT(1))
  DIMENSION HISTOUT(200)
  EQUIVALENCE (HISTOUT,NHISTOUT)
  DIMENSION WPNLST(18),LAUNLIST(18),NTARLIST(18),NTRYLC(18)
  EQUIVALENCE (NCODE,
  1 NHISTOUT(14)),[NPPMS,
  2 NHISTOUT(16)),[NMCYCLE,
  3 NHISTOUT(17)),[
  1 NHISTOUT(18)),[NNTTEST,
  2 NHISTOUT(19)),[
  3 NHISTOUT(20)),[LAUNLIST(1),NHISTOUT(43)],
  1 NHISTOUT(43)],
  2 NHISTOUT(43)],
  3 NHISTOUT(43)]

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4 EQUIVALENCE (INTARLIST(1),NHISTOUT(61)),(NERYLC(1), NHISTOUT(79))
1 (NHISTOUT(13)), NHISTOUT(16)), NHISTOUT(16))
2 (NHISTOUT(15)),(NHISTOUT(15)), NHISTOUT(15))
3 (NHISTOUT(17)),(NHISTOUT(17)), NHISTOUT(18))
DIMENSION INTARC(40)
EQUIVALENCE (NUGA, NHISTOUT(13)),(NUGY, NHISTOUT(14))
1 (NUGZ, NHISTOUT(15)),(NAGX, NHISTOUT(16))
2 (NAGY, NHISTOUT(17)),(NAGZ, NHISTOUT(18))
3 (NAGC, NHISTOUT(19)),(NAGD, NHISTOUT(19))
4 (INTARC(1),NHISTOUT(20)),(NMIRV,NHISTOUT(13))
EQUIVALENCE (NDEPEN,NHISTOUT(20))
EQUIVALENCE (THOUR,NHISTOUT(21)),(NTLIST,NHISTOUT(15))
DIMENSION NTLIST(15)
EQUIVALENCE (TOTIME,NHISTOUT(8))
EQUIVALENCE (TOTIME,NHISTOUT(22))
CUSE HISTREF 15MART1 *****
CEND COMMON/HISTREF/NFG,INEED *****
COMMON/PRINT/PRINT(60) *****
TYPE LOGICAL PRINT *****
COMMON/KEYWORDS/KEYARRAY(20) *****
EQUIVALENCE (KEYARRAY(15),KDEFZCN), (KEYARRAY(16),KDEFMPI)
MISSILE 28APRT1 *****
COMMON/MISSILE/PINC(80),PABORT(80),PUES(80),PFPF(80),TPCWER(80),
1 TRET(80),T(80),CEPH(80),PKMIS(80),TLINTH(80),IFUNC(80)
MISSILE *****
CUSE NAMES 28APRT1 *****
CEND COMMON/NAMES/NAMESIDE(2),NAMCLS(15),NAMETYPE(25) *****
COMMON/NAMES *****
COMMON/NWCRODOUT/NWCRODOUT *****
COMMON/TIME/TIME,FUTIME *****
COMMON/TRYL/INDEAMPN(18),PINCCH,NPCABORT,PUEST,PFLTFAIL,TPF,
1 TRETARG,IREP,MCYCLE,NCDON,NALIVE,NNABT,NSUCCESS,LATER,NDESNTST
WARHEAD 28APRT1 *****
COMMON/WARHEAD/YIELD(50),POUD(50),CEPH(50)
WARHEAD *****
DATA(LSHIFT=100000000) *****
DIMENSION KALT(2) *****
DATA(KALT=5H HIGH,5H LOW) *****
COMMON/HISREC/HREC,IDEPEN,LAZONE *****
TYPE INTEGER CSIDE *****
GO TO (10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,
1 170,180,190,2000,2100,2000) IH
1 NPLACE = INDP(LMT)
NEVENT = INDE(LMT)
2 NRCODE = 1
NINZONE = INZONE
NIALT = IALT
NINCH = NCH
NWCRODOUT = 22
5 NSIDE = SIDE
MTIME = TIME - 24
NINBASE = INBASE
NINDV = INDV

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NITYPE = IYPE
NICLASS = ICLASS
IF (NICLASS.EQ. 5001.5002)
5001 NICLASS = 2
5002 CONTINUE
JTYPE = IYPE + NITYPE*(NICLASS-1)
NIREG = IREG
NIALERT = IALERT
GO TO 9999
C MISSILE LAUNCH EVENT
10 GO TO (11,12,13,14,15,16,17,18,19,200,210,220,230,240),JM
11 NFEVENT = 1
NPLACE = INHASE
NTIME = TIME - 24.
NWPNS = NWPNS
NTARG = NTARG
NNHVENMHV
UC 8006 I=15,50
8006 NHTSCUT(I*10)=[NDATA(I;
IF (PRINT(I))11,1)5
1101 PRINT 9,11, NTIME,NWPNS,NAMETYPE(IYPE),NTARG
9011 FORMAT(F8.4,34.7H LAUNCH,14,11,8H AGAINST,14,12H TARGET SETS )
GO TO 9
12 K1 = 8H MISSILES
K2 = 8H LAUNCHED
NWCROUT = 78 + NWPNS
1201 NNSUCC = NSUCC
NNTST = NTEST
NNCYCLE = NNCYCLE
IF (PRINT(3))12J2,9999
1202 PRINT 9012, K1,K2,NSUCC
9012 FORMAT (10X,5H ALL ,8,1X,8,9H, NSUCC =,15)
GO TO 9999
13 K1 = 8H TARGETS
K2 = 8H COVERED
NWCROUT = 78 + NNCYCLE
J = NNCYCLE + 1
UC 1301 I=J,NWPNS
1301 NTRYLC(I) = 0
GO TO 1201
14 IF (NMIMV.GT. 1) 1403,1402
1402 NTRALIST(I)=14H
TOIME = TIME-24. + TOFLT
IF (PRINT(4))1401,9999
1401 PRINT 9014,INDV,INHASE,NTARG,TOTIME
9014 FORMAT(20X,8H MISSILE,13,1H=,14,17H TO ARRIVE AT 161,
1 16,3H AT,F8.4)
GO TO 9999
1403 IF (PRINT(4)) 1404,9999
1404 PRINT 9414,INDV,INHASE,NNHVV
9414 FORMAT(20X,8H MISSILE,13,1H=,14,17H LAUNCHED AGAINST,
113,8H TARGETS )
15 GO TO 9999
16 J = NNCYCLE + 1
UC 1601 I=J,NWPNS
1601 NTRYLC(I) = 7

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IF(IPRINT(5))1602,9999
1602 FTIME = FTIME - 24.
PRINT 9016, FTIME, NL, C, NL, AT, FB, 4, 13, 12H MISSILES VS, 15,
18M TARGETS )
17 GC TO 9999
18 NTRYLC(CYCLE) = 1
IF(IPRINT(2))1801,9999
1801 PRINT 9018, INDV, INBASE
9018 FORMAT(10X, 8H MISSILE, 13, 1H-, 14, 18H NOT IN COMMISSION )
GC TO 9999
19 NTRYLC(CYCLE) = 2
1901 IF(IPRINT(2))1902,9999
1902 PRINT 9019, INDV, INBASE
9019 FORMAT(10X, 8H MISSILE, 13, 1H-, 14, 10H SILC DEAD)
GC TO 9999
200 NTRYLC(CYCLE) = 3
IF(IPRINT(2))201,9999
201 PRINT 9201, INDV, INBASE
9201 FORMAT(10X, 8H MISSILE, 13, 1H-, 14, 13H LAUNCH ABORT )
GC TO 9999
210 NTRYLC(CYCLE) = 4
IF(IPRINT(2))211,9999
211 PRINT 9211, INBASE
9211 FORMAT (55X, 5H SILC, 10, 10H DESTROYED)
GC TO 9999
220 NTRYLC(CYCLE) = 5
IF(IPRINT(2))221,9999
221 PRINT 9221, INDV, INBASE
9221 FORMAT(10X, 8H MISSILE, 13, 1H-, 14, 25H FAILED IN POWERED FLI, NT )
GC TO 9999
230 NTRYLC(CYCLE) = 6
GC TO 9999
240 NTRYLC(CYCLE) = 6
GC TO 1911
C BOMBER/TANKER LAUNCH EVENT
20 GC TO (1, 22, 23, 24), JM
22 NRCODE = 3
IF(IPRINT(7))2201,9999
2201 T HOUR = FTIME - 24.
9022 PRINT 9022, HTIME, NAME, TYPE(JTYPE), INDV, INBASE, THOUR
9022 FORMAT(F9.4, 4X, A8, 13, 1H-, 14, 21H ABORT, NEW LAUNCH AT , FB, 4)
GC TO 9999
23 NRCODE = 2
CALL RCMF
IF(IPRINT(8))2301,9999
2301 PRINT 9023, HTIME, NAME, TYPE(JTYPE), INDV, INBASE
9023 FORMAT(F9.4, 4X, A8, 13, 1H-, 14, 22H NC LAUNCH - BASE DEAD )
GC TO 9999
24 IF(IPRINT(6))2401,9999
2401 T HOUR = T HOUR - 24.
9024 PRINT 9024, HTIME, NAME, TYPE(JTYPE), INDV, INBASE, THOUR
9024 FORMAT(F9.4, 4X, A8, 13, 1H-, 14, 11H LAUNCH, T ABORT , FB, 4)
GC TO 9999
C COMPLETE LAUNCH EVENT
30 GC TO (31, 32, 33, 34), JM

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140000
141000
142000
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31 NEVENT = 3
  NPLACE = INBASE
  NINTAR = INTAR
  JT=0
  MTIME=TIME-2%.
  NMIMV=NMIMV
  NCRUCUT=14*NMIMV
  %C TC 7
34 NCCODE=
  IF((PRINT(9))31.01.5
3101 PRINT 9031, MTIME, NAME TYPE (TYPE), INDV, INBASE, NMIMV
9031 FORMAT(F8.4,4X,AB,13,1H-,14,25M DESTROYED IN FIGHT #ITH,13,7H MI
  INVS)
  %C TC 9999
32 NCCODE=1
  IF((PRINT(47)) 3201,9999
3201 MTIME=TIME-2%.
  PRINT 9032, MTIME, NAME TYPE (TYPE), INDV, INBASE, NMIMV
9032 FORMAT(F9.4,4X,AB,13,1H-,14,24M RELEASES,13,6M #I4VS)
  %C TC 9999
33 FTIME = FTIME-2%.
  JT=JT+1
  NLIST(JT)=INTAR
  IF((PRINT(48)) 3301,9999
3301 PRINT 9033, INTAR, FTIME
9033 FORMAT(4X,15,3H AT,F9.4)
  %C TC 9999
C REFUELING EVENT
40 %C TC (41,42,43,44,45,46),JH
41 IF((PRINT(10))4101,9999
4101 PRINT 9041, MTIME, NAME TYPE (TYPE), INDV, INBASE
  1*INDP(1M), INEED
9041 FORMAT(F8.4,4X,AB,13,1H-,14,15M REFUEL IN AREA,13,
  1 5H ATIM,13,6M UNITS)
  %C TC 9999
42 NCCODE = 4
  IF((PRINT(11))4201,9999
4201 PRINT 9042, MTIME, NAME TYPE (TYPE), INDV, INBASE
  1*INDP(1M)
9042 FORMAT(F8.4,4X,AB,13,1H-,14,21M REFUEL ABORT IN AREA #13)
  %C TC 9999
44 NCCODE = 5
  IF((PRINT(12))4401,9999
4401 PRINT 9044, MTIME, NAME TYPE (TYPE), INDV, INBASE
  1*INDP(1M)
9044 FORMAT(F8.4,4X,AB,13,1H-,14,19M NO TANKERS IN AREA,13)
  %C TC 9999
45 NCCODE = NCCODE + 15
  CALL HCHBF
4502 IF((PRINT(13)) 4501,9999
4501 PRINT 9045
9045 FORMAT(131X,12M RETURN HOME)
  %C TC 9999
46 NCCODE=NCCODE+25
  %C TC 4512
C ENTER ZONE EVENT (ESEC)

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50 GC TO (1,52,53,54),JM
52 NRCQUE = 6
  IF((PRINT(15))5201,9999
5201 PRINT 9052, HTIME,NAME,TYPE(JTYPE),INDV,INBASE,INUP(1,1)
9052 FORMAT (F8.4,A4,A8,I3,1H-,1A,30H ENTER ENEMY TERRITORY AT ZONE,I3)
  GC TO 9999
53 NRCQUE = 7
  IF((PRINT(16))5301,9999
5301 PRINT 9053,HTIME,NAME,TYPE(JTYPE),INDV,INBASE,LAZONE,LOEPEN
9053 FORMAT(F8.4,A4,A8,I3,1H-,1A,32H LEAVE ENEMY TERRITORY FROM ZONE,I3)
  1,9M CORRIGR,I3)
  GC TO 9999
54 NCRHOUT = 0
  IF((PRINT(17))5401,9999
5401 PRINT 9054, HTIME,NAME,TYPE(JTYPE),INDV,INBASE,INZONE
9054 FORMAT (F8.4,A4,A8,I3,1H-,1A,11H ENTER ZONE,I3)
  GC TO 9999
  C AREA ATTRITION EVENT
  70 GC TO (71,72),JM
  71 NPLACE = INZONE
  NEVENT = 7
  GC TO 7
  72 NRCQUE = 8
  CALL RCHBF
  IF((PRINT(18))7201,9999
  7201 PRINT 9072, HTIME,NAME,TYPE(JTYPE),INDV,INBASE,INZONE
  9072 FORMAT (F8.4,A4,A8,I3,1H-,1A,16H ATTRIT IN ZONE,I3)
  GC TO 9999
  C LOCAL ATTRITION EVENT
  80 GC TO (81,82,83,84,85,86,87,88,810,820) JM
  81 NINTAR=INDP(1,1)
  GC TO 1
  82 NDUU = 1
  GC TO 9999
  83 NDUU = 2
  IF((PRINT(23))8301,9999
  8301 PRINT 9083
  9083 FORMAT(30X,12H DUU WARHEAD)
  GC TO 9999
  84 NRCQUE = 9
  LPRINT = 648EFCHE
  8401 INT = INT - 1
  CALL RCHBF
  IF((PRINT(20))8402,9999
  8402 PRINT 9084, HTIME,NAME,TYPE(JTYPE),INDV,INBASE,LPRINT,INTAR
  9084 FORMAT (F8.4,A4,A8,I3,1H-,1A,8H KILLED ,A6,4H TGT,I5)
  GC TO 9999
  85 NRCQUE = 10
  LPRINT = 64 AFTER
  MIS:1 LCCT71
  CSUBR
  GC TO 8401
  86 NASTYPE = NCM
  NRCQUE=27
  IF((PRINT(21))8601,9999
  8601 PRINT 9086, HTIME,NAME,TYPE(JTYPE),INDV,INBASE,INTAR
  9086 FORMAT (F8.4,A4,A8,I3,1H-,1A,16H ASM PEN. TO TGT,I5)

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GC TC 9999
87 N8CODE = 11
  N8MSTYPE = NCM
  IF (PRINT(22)) 9001,9999
8701 PRINT 9087, MTIME, NAME TYPE (JTYPE), INDV, INBASE, INTAR
9087 FCHMAT (F8.4,4X,A8.13,1H-,14,16H ASM KILL AT TGT,15)
GC TC 9999
88 IF (PRINT(19)) 8801,9999
8801 PRINT 9088, MTIME, NAME TYPE (JTYPE), INDV, INBASE, INTAR
9088 FCHMAT (F8.4,4X,A8.13,1H-,14,20H BOMBEN SURVIVES TGT,15)
GC TC 9999
89 IF (PRINT(54)) 811,9999
811 PRINT 812, MTIME, NAME TYPE (JTYPE), INDV, INBASE, INTAR, PKNAV
812 FCHMAT (F8.4,4X,A8.13,1H-,14,7H TARGET,15,16H SURVIVES PKNAV,F6.4)
GC TC 9999
82 IF (PRINT(55)) 813,9999
813 PRINT 814, MTIME, NAME TYPE (JTYPE), INDV, INBASE, INTAR, PKNAV
814 FCHMAT (F8.4,4X,A8.13,1H-,14,21H PENETRATES TO TARGET,15,7H PKNAV,
  IF6.4)
GC TC 9999
C TERMINAL BALLISTIC MISSILE DEFENSE EVENT
90 GC TC (91,92) JM
91 NEVENT = 9
  NPLACE = NINTAR = INTAR
  NNWTP = NWTP
  NNNAMEA = NAMEA
  NNTEHNT = TERM
  NNCRGUT = 18
GC TC 5
92 NNAL = NAL
  NNPEN = NPEN
  NNDET = NDET
  IF (PRINT(24)) 9201,9999
9201 PRINT 9092, MTIME, NAME TYPE (JTYPE), INDV, INBASE, INTAR, NAL, NPEN, NDET
9092 FCHMAT (F8.4,4X,A8.13,1H-,14,15H TERMBMD AT TGT,15,7H ALLOC,13,
  15H INT,13,15H WMD5. PEN. ANU,13,5H DET.)
GC TC 9999
C BUKST DAMAGE EVENT
100 GC TC (101,102,103,104,105,106,107,108) JM
101 CONTINUE
  NEVENT = 10
  NINTAR = NPLACE = INTAR
  NNWTP = NWTP
  NDCX = DGX
  RDGY = DGY
  NDGZ = DAGZ = DMDB
  NAGX = IAGX
  NAGY = IAGY
  ICUR = 0
  NNCRGUT = 20
  IF (PRINT(25)) 10101,10102
10101 PRINT 9101, NWTP, YIELD (NWTP), DDX, DGY, IAGX, IAGY
9101 FCHMAT (110,F13.2,411C)
10102 IF (ICLASS .GT. 2) 10103,5
10103 N8MSTYPE = NCM
GC TC 5

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02 IGBT = 3
10201 ICUR = ICUR * 1
      INTAK(ICUR) = INTAK + IGBT*LSHIFT
      GC TC 108
103 IGBT = 2
      GC TC 10201
104 IGBT = 1
      GC TC 10201
105 IGBT = 4
      GC TC 10201
106 IGBT = 1
      GC TC 10201
107 IGBT = 5
      GC TC 10201
108 IF(IPRINT(26))10801,9999
10801 KS = JH - 1
      GC TC (10802,10803,10804,10805,10806,10807)*KS
10802 PRINT 91082, INTAK
10802 FORMAT (10X,7H TARGET,16,7H KILLED)
      GC TC 9999
10803 PRINT 91083, INTAK
10803 FORMAT (10X,7H TARGET,16,12H NON-DYNAMIC)
      GC TC 9999
10804 PRINT 91084, INTAK
10804 FORMAT (10X,7H TARGET,16,9H SURVIVES)
      GC TC 9999
10805 PRINT 91085, INTAK
10805 FORMAT (10X,7H TARGET,16,13H ALREADY DEAD)
      GC TC 9999
10806 PRINT 91086, INTAK
10806 FORMAT (10X,7H TARGET,16,12H ICC DISTANT)
      GC TC 9999
10807 PRINT 91087, INTAK
10807 FORMAT (10X,7H TARGET,16,13H NOT IN COLLAR)
      GC TC 9999
      C ENTER REFUELING AREA EVENT
      110 IF(IPRINT(28))11001,1
11001 HTIME = TIME - 24.
      JTYPE = ITYPE + NTYPECOM(2)
      PRINT 9110, HTIME, NAME TYPE(JTYPE), INDV, INBASE, INDP(1:HT)
      9110 FORMAT (F8.4,4X,48,13,1H-,14,15H ARRIVE AT AREA,13)
      GC TC 1
      C LEAVE REFUELING AREA EVENT
      120 GC TC (121,122,1,124),JH
      121 IF(IPRINT(29))12101,9999
      12101 PRINT 9121, HTIME, NAME TYPE(JTYPE), INDV, INBASE, INZONE
      9121 FORMAT (F8.4,4X,48,13,1H-,14,13H DEPARTS AREA,13,6H EMPTY)
      GC TC 9999
      122 NRCODE = 13
      IF(IPRINT(30))12201,9999
      12201 PRINT 9122, HTIME, NAME TYPE(JTYPE), INDV, INBASE, INZONE, NRCODE
      9122 FORMAT (F8.4,4X,48,13,1H-,14,13H DEPARTS AREA,13,5H WITH,
      1 13,6H UNITS)
      GC TC 9999
      124 NRCODE = 12
      IF(IPRINT(31))12401,9999

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498

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160 GC TO 2
162 IF (PRINT(37)) 1621,9999
1621 POINT 9162,HTIME,NAME,TYPE(JTYPE),INDV,INBASE,IREC
9162 FORMAT (F8.4,A4.13,I4.1M-14.1M RECOVERY AT BASE,15)
GC TO 9999
163 NCCODE = 17
IF (PRINT(38)) 1631,9999
1631 POINT 9163,HTIME,NAME,TYPE(JTYPE),INDV,INBASE,IREC
9163 FORMAT (F8.4,A4.13,I4.1M-14.1M RECOVERY BASE,15.1M DEAD)
GC TO 9999
164 NCCODE = 21
IF (PRINT(43)) 1641,9999
1641 POINT 9164,HTIME,NAME,TYPE(JTYPE),INDV,INBASE
9164 FORMAT (F8.4,A4.13,I4.1M-14.1M NO LIVE BASE AVAILABLE ON DEPENDRA
ITION)
GC TO 9999
165 NCCODE = 22
IF (PRINT(44)) 1651,9999
1651 POINT 9165,HTIME,NAME,TYPE(JTYPE),INDV,INBASE,IREC
9165 FORMAT (F8.4,A4.13,I4.1M-14.1M RECOVERY BASE,15.1M SATURATED)
GC TO 9999
166 NCCODE = 25
IF (PRINT(50)) 1621,9999
167 NCCODE = 26
IF (PRINT(51)) 1631,9999
C CHANGE ALTITUDE EVENT
170 CONTINUE
172 J = IALT + 1
HTIME = TIME - 24.
JTYPE = ITYPE + NYPECUM(1)
PRINT 9172, HTIME, NAME, TYPE(JTYPE), INDV, INBASE, KALT(J)
9172 FORMAT (F8.4,A4.13,I4.1M-14.1M CHANGE TO:45.1M ALTITUDE)
GC TO 1
C AREA BALLISTIC MISSILE DEFENSE EVENT
180 GC TO 181,182,183,184,185,186,187,JM
181 NMWTP = NMWTP
NEVENT = 18
NPLACE = IAREAX
NINTAR = INTAR
NCCODE = 1
NCHOCUT = 16
GC TO 5
182 NCCODE = 1
KW = 6M PREV.
1821 IF (PRINT(43)) 1822,9999
1822 POINT 9182, HTIME, NAME, TYPE(JTYPE), INDV, INBASE, INTAR, KM
9182 FORMAT (F8.4,A4.13,I4.1M-14.1M 1G1.5.5.A6,
1 22M SELECTED FOR AREA BMD)
GC TO 9999
183 NCCODE = 2
KW = 6M NOT
GC TO 1821
184 NCCODE = 3
KW = 6M HERE
GC TO 1821

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185 NNAL = NAL
NTAM = TAIM
NNPHOS = NNHUSA
IF(INCODE.EQ.219999.1851
1851 IF(1PRINT(41))1852.9999
1852 PRINT 9185>NNAL=DEFZONE,TAIM,NNPHOSX
9185 FORMAT(10X,10H ALLOCATED,16,29H INTERCEPTORS FROM AREA ZONE 112,
14H AND,16,13H OBJECTS WITH,16,22H WAREHEADS PENETRATED)
GC TO 9999
186 CSIDE = 3 - SIDE
PRINT 9186=NAMES10E(CSIDE),DEFZONE
9106 FORMAT(5H ALL ,4,37H AREA INTERCEPTORS GONE IN AREA ZONE ,12)
GC TO 9999
187 IF(1PRINT(42))1871.9999
1871 PRINT 9187, HTIME, NAME1TYPE(JTYPE), INDV, INBASE, INIAR
9187 FORMAT (F8,4,4X,A8,13,1H-,14,23H RANDOM AREA BMD AT 161,15)
GC TO 9999
190 GC TO (191,192,193) JM
192 NACQUE=23 $ NDEPEN=INEC
IF(1PRINT(45))1921.9999
1921 PRINT 9192,HTIME,NAME1TYPE(JTYPE),INDV,INBASE,IRE
9192 FORMAT(F8,4,4X,A8,13,1H-,14,30H KILLED AFTER RECOVERY AT BASE,15)
GC TO 9999
193 NACQUE=24
NDEPEN=IREC
IF(1PRINT(49)) 1921.9999
191 NEVENT=19
NPLACE=INNP(IHT)
GC TO 2
2000 PRINT 9200, IM
9200 FORMAT (22H EVENT INDEX IN HIST #, 16)
9999 CONTINUE
RETURN
2000 GC TO (20100,20200) JM
20100 NEVENT=20
NSIDE=SIDE
NINBASE=INBASE
HTIME=TIME-24.
N JYP=JTYPE
NICLASS=ICLASS
NIREG=IREG
NIALE=IALERT
JTYPE=JTYPE+NTYPECUM(NICLASS-1)
NINRGDOUT=12
GC TO 9999
20200 IF(1PRINT(52)) 20300.9999
20300 UTIME =FUTIME-24.
PRINT 20400,HTIME,NAME1TYPE(JTYPE),INBASE,OTIME
20400 FORMAT(F8,4,4X,A8,4X,14,38H SCHEDULED FOR NAVAL ATTRITION AT TIME,
1 F8,4)
GC TO 9999
21000 GC TO (21100,21200) JM
21100 NEVENT=21
NSIDE=SIDE
NINBASE=INBASE
NITYPE=JTYPE

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5.4TS

HIST

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13

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HIST

AREADAT
HCHHEH
HKKPMT
NEFZGHE
EDATA
GRCUND
MISTAHM
MISTAL
MISTCUI
MISTREF
IPRINT
KEYMCRUS
MISSLE
NAME'S
NMCRUSUT
TIME
TRYL
WARHEAD
HISREC

EXTERNAL SYMBOLS

Q3000JMG
THEND.
Q80DICT.
HSHRF
STH.
QMSIN-L.

IDENT

HIST

05003
01517
00145
01060
00447
00001
01200
00002
00004
00003
00310
00002
00002
00024
01560
00413
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00002
00041
00226
00003

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EU

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CU0334	NHART										
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CU0020	NNC4	01561	01562								
CU0022	NNCOL										
CU0020	NNCYCLE	01712	01712								
CU0016	NNDECCYS										
CU0016	NNDET	03235	03235								
CU0014	NNH4V	01046	01047	02336	02336						
CU0017	NNPEN	03233	03233								
CU0021	NNSUCC	01706	01706								
CU0017	NNIARG	01644	01645								
CU0020	NNTERM	03225	03225								
CU0022	NNTEST	01710	01710								
CU0016	NNHDS	04355	04355								
CU0014	NNHDS	01042	01043								
CU0004	NNHYP	03221	03221	03302	03302	04276	04276				
CU0002	NNEN	03232	03232	03260	03260	02345	02345				
CU0007	NPLACE	01547	01550	04071	04071	04301	04301	02711	02711	03277	03300
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CU0530	NPLAN										
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CU0035	NSUCC	01705	01705	01725	01725						
CU0017	NTAIN	04353	04353								
CU0515	NTARG	01043	01044	01072	01072						
CU0074	NTARLIST	01700	01700								
CU0005	NTERM	03224	03224								
CU0040	NTEST	01707	01707								
CU0016	NLIST	02424	02424								
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CU0514	NHDS										
CU0002	NHDSX	04354	04354	04375	04375						
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		03227	03317	03317	04305	04306	04555	04555	04635	04635	
CU0030	NHPLIST										
CU0514	NHPLS	01041	01042	01666	01666	01702	01703	01743	02026	02027	
CU0504	NHYP	03220	03220	03301	03301	03327	03327	03331	04275	04275	
CU0004	NHYPG	03003	03003								
PU0660	CSINE										
CU0000	GUTDATA										
CU0120	PACRT										
CU0240	PDES										
CU0024	PDES										
CU0062	PDUO										
PU0701	PFC0002	04674									
PU0747	PFC0003	04702									
CU0025	PFLTFail										
CU0360	PPPF										

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HIST

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 PU2033 W500003. 02035
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 CU0426 X06ZC
 CU0020 XX
 CU1142 Y06Z
 CU0442 Y06ZC
 CU0000 YIELD 03331 03332
 CU1156 Z06Z
 CU0456 Z06ZC
 01115 SYMCLS

FTNS.5

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SUBROUTINE HISTHIT
  HISTHIT = 190071
  *****
  WRITES OUT HISTOUT BLOCK ONTO HISTORY TAPE
  COMMON/HISTOUT/HISTOUT(200)
  EQUIVALENCE(HFIME,HISTOUT(22))
  COMMON/ITP/ITP
  COMMON/NWCROGUT/NWCROGUT
  COMMON/TWCRD/TWCRD
  COMMON/TIME/TIME
  COMMON/TIME/TIME

  C
  WRITE OUT HISTOUT BLOCK ONTO HISTORY TAPE
  ITP = 5
  ITWCRD = NWCROGUT
  CALL TWCRD
  IF (HISTOUT(1) .GE. 2) 1,4
  1 IF (HISTOUT(7) .EQ. 10 .OR. HISTOUT(7) .EQ. 6) 4,3
  3 HFIME = FTIME - 24.
  4 CONTINUE
  CALL WHARRAY(HISTOUT,NWCROGUT)
  CLEAN HISTOUT BLOCK
  DO 2 I=1,NWCROGUT
  2 HISTOUT(I) = 0
  NWCROGUT = 1
  END
  C

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2000
3000
3100
4000
5000
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20000
21000

5.ATS HISTWRIT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HISTWRIT

HISTCUT

ITP

NWCRCUT

TWCRJ

TIME

EXTERNAL SYMBOLS

ORQDICT.

WRWCRJ

WRARAY

IDENT

00055

00003

00310

00001

00001

00001

00002

HISTWRIT

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5.ATS MISTWIT

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P00046 REGIN.
 P00053 COUNT.
 P00001 DICT.
 P00050 ENDING.
 P00003 EXIT.
 C00001 FTIME
 C00025 AFTIME
 P00003 MISTWIT
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 P00022 IF00001.
 P00046 INITIAL.
 C00000 ITP
 C00000 IT*CHO
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 P00041 .2
 P00025 .3
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 00042

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FUNCTION IFIND(IX)
  IFIND 10JUN71
  NACELL 22JUN71
  COMMON/19501/NdCELL,LINK(7000),STATUS(12000),COLAR(4000)
  NACELL
  COMMON/NCCL/NCCL,MAXIND
  DATA(ILSH=2,10000)UUUUUUUB)
  INT=IX*ILSH
  DO 1 I=1,NCCL
    N=COLAR(I)*AMU. 7777600000000000H
    IF (N*.EQ.INT)2,1
  1 CONTINUE
  IFIND=0
  RETURN
2 IFIND=1
End

```

5.4TS IFIND

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

IFIND

19501

NCOL

EXTERNAL SYMBOLS

OMODICT.

IDENT

00071

00004

54731

00002

IFIND

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ED

J

PAGE NO.

2

P00032	HEIF.	00055	00051		
C45771	CCLAR	00015			
P00001	UIC.	00035	00036		
P00047	ENJING.	00026	00030	00032	00034
P00000	EXI.	00053		00033	00034
P00010	FP00001.	00044			
P00064	GETPL.	00037			
P00054	GETPU.	00042			
P00066	I	00013	00014	00022	00027
P00004	IFINQ	00004			
P00003	ILSH	00011			
P00032	INITIAL.	00007			
P00067	INT	00012			
P00004	IX	00010			
P00022	.1	00020			
P00027	.2	00021			
C00001	LINKH				
C00001	MAXIND				
C00000	NHCELL				
C00000	NCCL	00023	00023		
P00070	NA	00017			
P00046	PF00002.	00043			
X00001	U800ICT.	00000			
C15531	STATUS	00005			
P00023	TS00001.				
P00031	VALUE.				
P00014	WS00001.	00030	00052		
	00033 SYMHCLS	00024			

PROGRAM LENGTH
 ENTRY POINTS
 BLOCK NAMES
 ESTOR
 TIME
 CONST
 EXTERNAL SYMBOLS
 0800DICT.

IDENT

J0102
 J0003
 01746
 J0002
 J0002

PJ0044	HEG14.	00360	00066	00072	
P00001	DICT.	00005	00047	00050	
P00061	ENDING.	00005	00043	00044	00046
P00002	EXIT.	00004			
P00032	FP0001.	00057			
C00001	FTMAX	00016		00023	
C00001	FUTKE				
P00075	GETPL.	00051	00071		
P00065	GETPJ.	00054	00022	00030	00040
P00100	1	00051			
C00007	INUATP	00003			
P00003	INITEV	00003			
PJ0044	INITIAL.	00005			
C00007	ISUIMP				
C01207	ISVAT				
P00003	ITAPES	00032			
C00001	ITMAX	00017			
C01734	ITSCC	00025	00026	00036	00037
P00025	*1				
P00035	*2				
P00040	*3				
P00042	*4				
P00101	J	00034	00034		
C00000	LARGE	00033	00036		
C01707	MEXTIM	00013	00013		
C00006	MEXISM	00017	00020		
C00004	NDIMP	00042	00043		
C00005	NEATEV	00003	00011		
C00003	NWCRUS	00011			
P00060	PF00002.	00055	00004		
X00001	Q800ICT.	00000			
C00000	SCALEI				
C00001	SCALETI				
C01722	SVTIME				
C01710	TAPEI	00024	00024		
C00000	TIME	00007	00010		
C00002	THAX	C00005	00015	00015	
P00023	*S00001.	00027			
P00031	*S00002.	00041			
	00047 SYMCLS				

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1

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SUBROUTINE INITLIST
  INITLIST 10JUN71
  INITIALIZE LIST MEMORY
  COMMON/LISTMEM/IAVAIL
  COMMON/EVINDEX/IND,EVTIME(10),INDEVR(10)
  COMMON/ESTOR/SCALET,SCALETI,IMAX,NCHORDS,NOIND,NEATEV,MERUSM,
  1 INDAIP(320),ICUTOP(320),ISVDAT(320),REMTIM,IAPEI(10),SVTIME(10)
  2 ,ITQSS(10)
  CUSE NBCELL 22JUN71
  COMMON/19501/NBCELL,LINKM(7000),STATUS(12000),CELLAR(4000)
  CEND NBCELL
  COMMON/HONDAT/MONS#
  MONS# = 0
  IAVAIL = 0
  DO 2 I = 1, NBCELL
    LINKM(I) = 0
    NX F NBCELL
    CALL ADDMEM(I, NX, LINKM)
    DO 1 I = 1, 10
      EVTIME(I) = IMAX
      INDEVR(I) = C
    1 CONTINUE
  2 ENI

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7000
8000
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1000
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12000
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19000
20000

5475 INITLIST

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

INITLIST

LISTMEM
EVINDA
ESTOR
195-1
MONDAT

EXTERNAL SYMBOLS

ORDDICT.
ADOMEA

IDENT

00050
J0003
J0001
J0025
1746
54731
J0001

INITLIST

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ED

0

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2

5.4TS INITIALIST

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X00002	ADMEM	00025	
P00040	BEGIN	00041	
C45071	CCLAN		
P00045	CCUNT	00016	
P00001	DICT	00017	00017
P00042	ENDING	00005	00026
C00001	EVTIME	00006	00037
P00000	EXIT	00034	00034
P00046	I	00043	
C00000	IAVAIL	00013	00016
C00007	INGATP	00011	00031
C00013	INDEVM		00032
P00040	INITIAL	00035	
P00003	INITLIST	00005	
C00507	ICUTUP	00003	
C01207	ISVDET		
C01734	ITSCC		
P00036	.1		
P00020	.2		
C00001	LIARK	00020	00021
C01707	MEXTIM		00030
C00066	MERGSM		
C00000	MCNS4	00007	00012
C00000	MCCELL	00013	00014
C00000	NRINQ		00023
C00004	NDIM		00023
C00005	NEATEV		
C00003	NWCARD5		
P00047	NX	00024	00027
X00001	OBDDICT	00000	00004
C00000	SCALET		
C00001	SCALETI		
C15331	STATUS		
C01722	SVTIVE		
C01700	TAPET		
C00002	T44X	00033	00033
P00023	TSCJ001	00015	
P00020	W500001	00022	
P00033	W500002	00035	
00047 SY44CLS			

```

SUMROUTINE LATINIT
LATINIT 28APR71 *****
TESTS IF VEHICLE SURVIVES PASSAGE THROUGH LOCAL TARGET DEFENSES
C CUSE 45M5 28APR71 *****
COMMON/ASMS/PLAORT(20),CEPA(20)
45M5 *****
COMMON/ROMER 28APR71 *****
COMMON/ROMER/PLAORT(80),IMDEL(80),ABWATE(80),PRABT(80),CEPH(80),
1 TLINTH(80),IFUNCH(80)
ROMER *****
ERATAR 24JAN71 *****
COMMON/ERATAR/SIDES,INASE,INDM,JNTAK,NWTPC,DUGC,DGTC,DHCRG,ITYPC,
1 ICLASSC,IREGC,IALENTC,INCONC,INDMIG,NULSC,IALT,INMCS,PKNAV,SPC(2),
2 IMTC,JATC,XX(2),NALTG,TABORTC,FINCG(80),INDPC(80),INDEC(80),
3 INTPC(12),XOGZ(12),YOGZ(12),ZOGZ(12),G(6),CUTDATA(32),SIDE,
4 INASE,INDV,INTAK,NWTPC,DUGC,DGTC,ITYPC,ICLASSC,IREGC,IALENT,
5 INZONE,NMCH,NOLC,IALT,NCH,PKNAV,SPANE(2),IMT,JAT,EXTRA(2),NALT,
6 TABORT,FINCG(80),INDP(80),INDE(80),INTYP(12),XOGZ(12),YOGZ(12),
7 ZOGZ(12),CUTDATA(32)
EQUVALENCE (SIDES,CUTDATA(1)), (SIDE,INDATA(1))
EQUVALENCE (INPLA,NALT), (IMT,IMT), (JAT,JAT)
TYPE INTEGER DUGC,DGTC,DHCRG,XOGZ,YOGZ,ZOGZ
TYPE INTEGER DUGC,DGTC,DHCRG,XOGZ,YOGZ,ZOGZ
TYPE INTEGER CUTDATA,SIDE,SIDEC
CEND EDATAR *****
EQUVALENCE (NCH,INSMTYPE)
COMMON/CHUNK/IAA,IAAY
COMMON/KEYNCROSS/KEYARWAY(2)
EQUVALENCE (KEYARWAY(3),TANDEFLO),(KEYARWAY(4),TANDEFM)
COMMON/LATTIT/DEPH,DEFLC,RKRP
COMMON/TIME/TIME,FUTIME
CUSE 44HEAD 28APR71 *****
COMMON/44HEAD/YIELD(50),PDU(150),CEPW(50)
44HEAD *****
COMMON/ZONES/AREA(63),ZDEFPOT(63),ZCCPOT(63),MPENZ(63),KILLZ(63),
1 MAXZONE(2)
COMMON/19401/RCCELL,LINKM(7000),STATUS(12000),COLAR(4000)
CUSE 19CELL 22JUN71 *****
COMMON/19CELL *****
CEND 19CELL *****
1 CONTINUE
C 46COMO CALL TO LATINIT
CALL HIST(8,1)
C 190 = 0
C GET TARGET INDEX FROM HISTORY TABLE
INTAK = INDP(141)
C TEST IF NAVAL ATTACK WEAPON
16 IF (PKNAV .ST. 0) 21.17
C TEST ALTITUDE OF ROMER, GET APPROPRIATE DEFENSE STATUS
17 IF (IALT .EQ. 0) 19.18
18 DEFDEFM1=IGET(TANDEFM1,INTAK,STATUS)
NDECCYS = NDMI
GO TO 2
19 DEFDEFLO=IGET(TANDEFLO,INTAK,STATUS)
NDECCYS = ADLC
C TEST IF TARGET IS DEFENDED AGAINST VEHICLES AT THIS ALTITUDE

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2

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2 IF (DEF .EQ. 2) 5.3
3 SP = CAPT=DEF/(1. + .5*NDCCYSI)
C TEST IF VEHICLE SURVIVES LOCAL DEFENSES
4 IF (SP .LT. RANF(-1)) 11.5
C HERE VEHICLE SURVIVES
C CLASS 2 CONSISTS OF BOMBERS, CLASS 4 OF ASWS
5 IF (ICLASS .EQ. 2) 52.51
C RECORD ASM LOCAL SURVIVAL
51 CALL HIST(8.5)
C TO C
C ALL DECOYS DOWN--DECREASE NUMBER OF PENETRATIONS IN ZONE
52 NPEZ(INZONE) = NPEZ(INZONE) - NDLC
C NDLC = 1
C RECORD BOMBER SURVIVAL OF LOCAL DEFENSES
CALL HIST(8.8)
C SET SWITCH TO PLANT FOLLOW-ON BOMBER EVENT
ICG = 1
C GET WEAPON TYPE FROM WEAPON TABLE, TEST FOR DUD WARHEAD
6 NATYP = INTYP(JWT)
IF (PDUD(NATYP) .LT. RANF(-1)) 7.14
C CLASS 2 CONSISTS OF BOMBERS, CLASS 3 OF ASWS
7 IF (ICLASS .EQ. 2) 72.71
C COMPUTE WEAPON SIGMA USING ASM CEP
71 SIG = CEPA(IASMTYPE)*42.4738
C TO C
C COMPUTE WEAPON SIGMA USING BOMBER CEP
72 SIG = CEPB(IITYPE) * 42.4738
C COMPUTE DESIRED GROUND ZERO COMPONENTS USING WEAPON TABLE DATA
73 DGA = XDGA(JWT)
DGY = YUGA(JWT)
DNGH = ZNGZ(JWT)
C COMPUTE ACTUAL GROUND ZERO COMPONENTS
IAGY = SIG * RIDEV(10) * DGY
IAGX = SIG * RIDEV(10) * DGX
C RECORD NON-DUD WEAPON RELEASE
CALL HIST(8.2)
C CALL FOR MURST DAMAGE ASSESSMENT
77 CALL RDAMAGE
C CONTINUE
C IF LIVE BOMBER, PLANT NEXT EVENT
JWT = JWT - 1
IF (ICG .EQ. 0) 10.9
9 CALL NEXTEVT
10 RETURN
C HERE VEHICLE IS KILLED
C CLASS 2 CONSISTS OF BOMBERS, CLASS 4 OF ASWS
11 IF (ICLASS .EQ. 2) 11.11
C RECORD ASM LOCAL ATTRITION
111 CALL HIST(8.7)
C RETURN
C DECREASE PENETRATIONS BY ONE FOR BOMBER PLUS NUMBER OF ITS DECOYS
112 NPEZ(INZONE) = NPEZ(INZONE) - 1 - NDLC
C TEST IF BOMBER RELEASED WEAPON BEFORE KILL
12 IF (BKSHD .GT. RANF(-1)) 80.13
C KILL AFTER WEAPON RELEASE
13 CALL HIST(8.5)

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FTNS.5

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C      GC TO 6
      RECORD DUD WEAPON RELEASE
      14 CALL HIST(8.3)
      GC TO 8
C      RECORD KILL BEFORE WEAPON RELEASE
      80 CALL HIST(8.4)
      RETURN
C      TEST IF NAVAL WEAPON WEAPON IS SUCCESSFUL
      21 IF(PKNAV.GE.HRNF(-1)) 23.22
C      21 TARGET SURVIVES
      22 CALL HIST(8.9)
      IGC=1
C      GC TO 8
      WEAPON PENETRATES
      23 CALL HIST(8.10)
      IGC=1
      NMTYP=INTYP(JWT)
      GC TO 77
      END

```

890000
900000
910000
920000
930000
940000
950000
960000
970000
980000
990000
100000
101000
102000
103000
104000
105000
106000
107000

5.ATS	LATRIT	01/03/72	EU	J	PAGE NO.	5
C00240	ABRATE					
C00000	AREA					
C00472	H					
K00010	DAMAGE	00176				
P00272	REGIN.	00273				
C00002	HKRRP	00230				
C00024	CEPA	00140				
C00500	CEPR	00144				
C00144	CEPW					
C45071	COLAR					
P00322	DEF	00052	00055	00064		
C00000	DEFHI	00034				
C00001	DEFLO	00050				
C00505	DGA	00170				
C00005	DGAC					
C00506	DGY	00151	00160			
C00006	DGYC					
C00507	DHCR	00152				
C00007	DHCRD					
P00001	DICT.	00005	00010	00042	00147	00154
P00274	ENDING.	00174	00177	00214	00252	00257
P00000	EXIT.	00006	00207	00246	00263	00264
X00013	EXPF	00275				
C00526	EXTRA	00066				
K00001	FUTIME					
K00005	HIST	00007	00103	00173		
C00000	IAGX	00172	00172			
C00001	IAGY	00162				
C00513	IALEWT					
C00013	IALERIG					
C00517	IALT	00022	00022			
C00017	IALTS					
C00520	IASMTYPE	00137	00137			
C00001	IMASE					
C00511	ICLASS	00100	00134	00134	00210	00210
C00011	ICLASSC					
C00740	IFUNCN					
X00006	IGET	00025	00041			
P00323	IGD	00013	00121	00262	00267	
C00524	IMI	00013	00014			
C00024	INTC					
C00501	INBASE					
C00500	INDATA					
C00772	INDUC					
C00272	INDUC					
C00002	INDM					
C00652	INDUP					
C00152	INDUPC	00014				
C00502	INDV					
P00272	INITIAL.	00006				
C00503	INITAR	00015	00027	00043	00217	00217
C00514	INLCNE	00107	00107			
C00014	INLCNOC					

CU0512 IREG
 CU0012 IREG
 CU0510 IYPE
 CU0010 IYPE
 CU0112 IYPE
 CU0412 IYPE
 PU0007 .1
 PU0207 .10
 PU0210 .11
 PU0213 .111
 PU0217 .112
 PU0224 .12
 PU0233 .13
 PU0237 .14
 PU0016 .1e
 PU0022 .17
 PU0025 .18
 PU0041 .19
 PU0055 .2
 PU0247 .21
 PU0256 .22
 PU0263 .23
 PU0060 .3
 PU0071 .4
 PU0100 .5
 PU0103 .51
 PU0107 .52
 PU0122 .6
 PU0134 .7
 PU0137 .71
 PU0143 .72
 PU0147 .73
 PU0176 .77
 PU0200 .8
 PU0243 .80
 PU0205 .9
 PU0276 .ERASER.
 CU0003 JNIAH
 CU0525 JWC
 CU0025 JWC
 CU0000 KEYHARAY
 CU0374 KILLZ
 PU0003 LATITIT
 CU0001 LINKH
 CU0473 MAXZONE
 CU0524 MHT
 CU0525 MHT
 CU0530 NALT
 CU0030 NALT
 CU0000 NRCCELL
 CU0520 NCM
 CU0020 NCM
 PU0324 NUCESYS
 CU0515 NDMI

00143 00143

00123 00270

00204 00077

00211 00212

00231 00231

00132 00133

00020 00020

00023 00024

00040 00041

00021 00255

00254 00056

00057 00076

00101 00102

00106 00236

00135 00136

00142 00271

00242 00242

00203 00034

00122 00122

00050 00050

00122 00122

00003 00003

00054 00054

00030 00030

00062 00062

00221 00221

00222

00025 00025

00020 00020

00125 00125

00201 00201

00072 00072

00200 00200

00065 00065

00147 00147

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5.4TS LATRIT

Code	Label	00053	00111	00111	00113	00114	00222
C00015	NM1C						
C00510	NOLC						
C00016	NOLCC						
X00011	NEATEVNT	00205					
C00275	NPEAZ	00110	00112	00112	00240	00220	00223
C00530	NPLAN						
C00504	NWTPC	00123	00130	00131	00271		
C00004	NWTPC						
C00000	OUTDATA						
C00062	POUD						
C00521	PKNAV	00131	00132				
C00021	PKNAV	00010	00016	00253	00254		
C00000	PLARCR						
C00000	PLARCR						
C00300	PLARCR						
C00300	PLARCR						
C00002	Q1002100	00157	00157				
X00001	Q1004100	00061					
X00003	Q1010100	00101	00171				
X00004	Q8001010	00000	00004				
X00012	MANF	00073	00126	00226	00251		
X00007	HNUEV	00153	00103				
C00500	SIDE						
C00000	SINEC						
P00325	SIG	00142	00146	00156	00166		
P00326	SP	00070	00075				
C00522	SPARE						
C00022	SPC						
C15531	STATUS	00030	00044				
C00531	TABORT						
C00031	TABORT						
C00003	TARDEFHI	00027					
C00002	TARDEFLO	00043					
C00000	TIME						
C00532	TINC						
C00032	TINC						
C00020	TLINTR						
C00120	TMDEL						
C01126	XDZ						
C00426	XDZ	00150					
C00026	XX						
C01142	YDZ	00151					
C00442	YDZ						
C00000	YIELD						
C00176	ZCCPST						
C00077	ZDEFECT						
C01156	ZDZ	00152					
C00456	ZDZ						
00232	SYNCLS						

01/03/72

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SUBROUTINE LRAREA
  LRAREA 10JUN71 *****
  C HECCHOS DEPARTURE OF A TANKER FROM A REFUELING AREA *****
  CUSE
  EDATAR 4JAN71 *****
  COMMON/EDATA/SIDEG,IBASE,INDM,JNTAM,NWTPC,DGKG,DGTC,DHCHG,I,TPC,
  1ICLASSO,IREGG,IALENTC,INZNG,NHIG,NULCG,IALTC,NMCP,PKNAV,SPG(12),
  2IATC,JWTC,KX(12),NALTC,TABORTC,IINCG(10),INDPC(80),INDEX(10),
  3IWTYP(12),XDGZ(12),YDGZ(12),ZDGZ(12),B(6),CUTDATA(120),SIDE,
  4IRASE,INOV,INTAK,NWTPC,DGK,DGTC,DHCHG,I,TYPE,ICLASS,IMEG,IALENT,
  5INZNE,NDHI,NOLC,IALT,NMCP,PKNAV,SPARE(2),IMT,JMT,EXTRA(2),NALT,
  6TABORT,TINC(80),INOP(80),INDE(80),IWTYP(12),XDGZ(12),YDGZ(12),
  7ZDGZ(12),INDATA(120)
  EQUIVALENCE (SIDEG,CUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (NPLAN,NALT), (MMT,IMT), (MWT,JMT)
  TYPE INTEGER DOK,DGY,DHCH,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER DOK,DGY,DHCH,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER CUTDATA,SIDE,SIDEG
  CEND
  EDATAR *****
  COMMON/EPSN/EPSN
  COMMON/HISTOUT/HISTOUT(200)
  CUSE
  HISTREF 15MAR71 *****
  COMMON/HISTREF/HISTREF,IMEG
  CEND
  HISTREF *****
  EQUIVALENCE (NEVENT,NHISTOUT(7))
  COMMON/KEYWORDS/KEYARRAY(20)
  CUSE
  MECSV 28APR71 *****
  EQUIVALENCE (KEYARRAY(1)),(STAT)
  COMMON/RECCH/RECCH(50,4,2),ICFREC(50,4,2),NMORE(50,4,2),
  1 NRES(50,4,2),LSHIFT
  CEND
  MECSV *****
  COMMON/REFUEL/NFTANK(100),NETANK(100)
  CUSE
  COMMON/TIME/TIME,FUTIME
  CEND
  NBCELL 22JUN71 *****
  COMMON/19501/NBCELL,LINKM(7000),STATUS(12000),COLAR(4000)
  CEND
  NBCELL *****
  ) CONTINUE
  IABORT = 0
  C HECCHD CALL TO LRAREA
  CALL HIST(12,3)
  C GET REFUELING AREA NUMBER FROM TANKER HISTORY TABLE
  INDRA=INDP(IHT)
  C TEST IF TANKER IS LEAVING BECAUSE OF ABORT
  IF (TABORT .LE. TIME*EPSN) 5,2
  C TEST FOR EMPTY TANKERS IN REFUELING AREA
  2 IF (NETANK(INDRA) .GE. 60) 3,4
  C DECREASE NUMBER OF EMPTY TANKERS AS ONE LEAVES AREA
  3 NETANK(INDRA)=NETANK(INDRA) - 60
  C NFGC = 0
  C HECCHD EMPTY TANKER DEPARTURE FROM REFUELING AREA
  CALL HIST(12,1)
  C GO TO 9
  C DECREASE NUMBER OF FULL TANKERS IN AREA AS ONE LEAVES
  4 NFGC = 60
  IF (NETANK(INDRA) .GT. 1) 4,42
  41 NFGC = 60 - NETANK(INDRA)

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FTNS.S

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NETANK(INDKA) = 0
42 NPTANK(INDKA) = NPTANK(INDKA) - NFGC
C      RECORD FULL TANKER DEPARTURE FROM REFUELING AREA
      CALL HIST(12,2)
      GO TO 1C
C      DETERMINE IF FULL OR EMPTY TANKER LEAVES
      5 NPT = 0
      NPT = NETANK(INDKA)/60
      NET = NETANK(INDKA)/60
      NPTANK = NPTANK(INDKA) - NPT*60
51 IF(NPTANK<53,53,52)
52 NPT = 1
53 TCI = NPT + NET + NET
56 FEMPTY = NET/TCI
      H = MAXF(-1)
61 IF(FEMPTY.GT.H) 17*8
      7 IACRT = 1
      GO TO 3
8 FULL = NPT/TCI
81 IF((FULL + FEMPTY).GT.H) 82,83
C      82 ARCT OF FULL TANKER
      82 NFGC = 60
      GO TO 84
C      83 ARCT OF PARTIAL TANKER
      NFGC = NPTANK
      NETANK(INDKA) = NETANK(INDKA) - 60 + NFGC
84 NPTANK(INDKA) = NETANK(INDKA) - NFGC
      CALL HIST(12,4)
      RETURN
9 IF(IACRT<11,10)
C      9 ARCT OF EMPTY TANKER
C      HISTWRT RECORDS DEPARTURE OF EMPTY TANKER
C      THEN AN ARCT IS RECORDED
11 CALL HISTWRT
      INZONE=SIDE
      CALL HIST(13,1)
      CALL HIST(13,3)
      RETURN
C      10 PREPARE TO RECOVER TANKER
      10 INZONE=SIDE
      JWC=J
      IS = SIDE
      DO 100 I=1,4
      K=INT(I-1)/LSHIFT
      INDEP=INIP(I-1)-K*LSHIFT
      :BASE = INECOV(IDEPEN,K,IS)
      IX=IGET(ISTAT,INASE,STATUS)
      IF(IX) 31,100
31 IF(IX) 33,32
C      32 MOST DISTANT LIVE BASE
33 IF(INMCWE(IDEPEN,K,IS).GT.G) J4=100
C      MOST DISTANT AVAILABLE BASE

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PAGE NO.

3

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34 Ip=I
   GC TO 35
100 CONTINUE
   UC COMPLETED- USE SATURATED BASE ON ABORT
   IF (IN) 35,36
   C   NO LIVE BASE
36 INOPC=0
   IF=1
   GC TO 47
35 INOPC=INOP(IHT-IN)
37 FUTURE=TIME+TINC(IHT-IR)
   NRES=(IDEPEN+IR+IS) * NRES/(IDEPEN+IN+IS) - 1
38 IF (TARORT-FUTURE+EPSN)%0.40,39
39 INOPC=0
   CALL PLANTS(16,12)
   RETURN
40 FUTURE=TARORT
   INZNG = SIOE
   CALL PLANTS(13,12)
   RETURN
   END

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5.415 LAREA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

LAREA

ENATA

EPSN

MISTOUT

MISTREF

KEYWORDS

RECOV

REFUEL

TIME

19501

EXTERNAL SYMBOLS

URGDICT

MIST

MISTMIT

IGET

PLANTS

HANE

IDENT

LAREA

00434

00003

01200

00001

00310

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03161

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04731

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EU

J

PAGE NO.

LRAREA	00005	00012	00035	00057	00117	00155	00163	00167	00172	00235	00315
C00472 R											
P00373 REGIN.	00373										
C45071 COLAR											
C00505 UGA											
C00005 UGAC											
C00506 UGY											
C00006 DGYC											
C00507 DHCH											
C00007 DHCHC											
P00001 UICT.											
P00374 ENJING.											
C00000 EPSN	00325	00157	00174	00317	00327						
P00000 EXIT.	00320	00021	00310	00311							
C00526 EXTRA	00374										
P00414 FEAPTY	00114	00121	00134								
P00415 FULL	00132	00133									
C00001 FULME	00302	00302	00307	00307	00321	00321					
X00002 MIST	00011	00034	00056	00154	00166	00171					
X00003 MISTWIT	00162										
P00416 I	00206	00210	00221	00244	00253	00257					
P00417 IAGRT	00010	00125	00160								
C00513 IALEMT											
C00013 IALERTC											
C00517 IALT											
C00017 IALTC											
C00001 IBASE	00232	00233	00236								
C00511 ICLASS											
C00011 ICLASSC											
P00420 IDEPEN	00227	00355									
X00004 IGET	00234	00014	00207	00207	00220	00220	00267	00267	00274	00274	
C00524 IMT	00014										
C00024 IMTC	00177	00247	00341	00351	00360						
P00330 IN00003.	00231	00247	00341	00351	00360						
P00331 IN00004.	00303	00340	00361	00371							
C00501 INBASE											
C00500 INDATA											
C00772 INDE	00312	00313									
C00272 INDEC											
C00002 INDM											
C00652 INDP	00015	00212	00213	00225	00226	00272	00273				
C00152 INDPG	00262	00263	00273								
P00421 INDR	00016	00023	00027	00042	00046	00052	00063	00143	00150		
C00502 INDV											
C00001 INEED											
P00373 INITIAL.	00006										
C00503 INTAR											
C00514 INZONE	00165	00176									
C00014 INZONG	00323										
P00422 IR	00201	00242	00245	00254	00261	00264	00270	00275	00365		
C00000 IRECOV	00231	00232									
C00512 IREG											
C00012 IREGC											
P00423 IS	00204	00334									

S-4TS	LRAHEA		01/03/72	CU	J	PAGE NO.	T
C00515	NPMI						
C00013	NPMIC						
C00516	NOLC						
C00014	NOLCC						
P00426	NFT	00072	U0103	U0110			
C00144	NETANK	00024	U0024	U0030			
C00066	NEVENT	00067	U0070	U0144			
C00000	NFEC	00012	U0033	U0040			
P00427	NFI	00142	U0145	U0146			
C00000	NFTANK	00067	U0073	U0193			
		00053	U0053	U0055			
		00153					
C00000	NHISTOUT	00250	U0250				
C01440	NMGRE						
C00530	NPLAN						
P00430	NPT	00063	U0101	U0102			
P00431	NPTANK	00075	U0076	U0141			
C02260	NRES	00304	U0304	U0305			
C00504	NRTYP						
C00004	NRTYPC						
C00000	OUTDATA						
C00521	PRNAV						
C00021	PRNAVC						
X00005	PLANTS	00314	U0324				
X00001	USDNICT.	00000	U0004				
P00432	R	00120	U0122	U0135			
X00006	RAMF	00116	U0116				
C00500	SUE	00184	U0184				
C00000	SUEG						
C00522	SPARF						
C00022	SPS						
C15531	STATUS	00237	U0237				
C00531	TACHT	00016	U0017	U0306	00320	00320	
C00031	TACHTC						
C00000	TIME	00017	U0020	U0277	00277		
C00532	TINC	00301	U0301				
C00032	TINCO						
C00620	TGFREC						
P00433	TGT	00107	U0114	U0132			
C00000	TSTAT	00236	U0236				
P00333	UPUGG03	00205	U0334	U0335	00342	00342	
P00344	UPUGG04	00217	U0346	U0347	U0351	00352	
P00354	UPUGG05	00230	U0355	U0356	U0362	00362	
C00364	UPUGG06	00202	U0246	U0255	U0365	00366	
P00207	W500001.	00260					
C01126	XDGZ						
C00426	XDGZG						
C00026	XX						
C01142	YDGZ						
C00442	YDGZG						
C01156	ZDGZ						
C00456	ZDGZG						
	00235 SYMBOLS						

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1

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SUBROUTINE MLAUN
  CUSRR      28APR71
  C          TESTS FOR SUCCESSFUL LAUNCHES OF MISSILES IN A SWADRON
  CUSE       EDATAM 26AUG70
  COMMON/EDATA/SIDEC,IBASE,INDM,INTAR,NWTPC,DGXC,DGYS,DHCHG,
  1          :TYPE,ICLASSC,INEG,IALERT,NWPNSC,NTARGC,
  1          :MPLIST(18),MLAUNLIST(18),MLISTC(27),CUTDATA(320),
  1          :SIDE,INBASE,INDV,INTAR,NWTPD,DGX,DGY,DHGB,
  1          :ITYPE,ICLASS,INEG,IALERT,NWPNSC,NTARG,
  1          :MPLIST(18),LAUNLIST(18),MLIST(270),INDATA(320)
  TYPE INTEGER CUTDATA,SIDE,OSIDE,AAIM,TAIM,MPLIST
  TYPE INTEGER DGX,DGY,DHGB,DGXC,DGYS,DHCHG
  TYPE INTEGER TAIMC,AAIMC
  EQUIVALENCE (SIDEC,CUTDATA(1)),(SIDE,INDATA(1))
  EQUIVALENCE (IPAYLQAD,INDATA(5)),(NMIRV,INDATA(8))
  EQUIVALENCE (INITVULC,CUTDATA(7)),(INITVULN,INDATA(7))
  EQUIVALENCE (TSFC,CUTDATA(27)),(TCF,INDATA(27))
  DIMENSION MDATA(14),MDATAC(14),ATCF(14),ATCFG(14)
  EQUIVALENCE (MDATAC,CUTDATA(13)),(MDATA,INDATA(13))
  EQUIVALENCE (NMHUS,INDATA(13)),(TAIM,INDATA(14))
  EQUIVALENCE (AAIM,INDATA(15))
  EQUIVALENCE (TAIMC,CUTDATA(14)),(AAIMC,CUTDATA(15))
  EQUIVALENCE (NMHUSC,CUTDATA(13))
  DIMENSION MPLIST(270)
  EQUIVALENCE (MPLIST,MPLIST)
  EDATAM *****
  COMMON/HISTAL/ALG,TCFLT,1W
  COMMON/INDEX/INDEX(30)
  COMMON/INREP/INREP
  COMMON/KEYWORDS/KEYARRAY(20)
  EQUIVALENCE (KEYARRAY(6),TVULN)
  CUSE      MISSLE 28APR71 *****
  COMMON/MISSLE/PINC(180),PARCOT(180),PDES(180),PPPF(180),IPSWER(180),
  1          :TRET(180),IR(180),CEPM(180),PKMIS(180),TLINTH(180),IFUNC(180)
  CEND      MISSLE *****
  COMMON/TIME/TIME,FUTIME
  COMMON/TRYL/INDEXAPN(18),PINCMM,PNCACORT,PDEST,PFLTFAIL,IMF,
  1          :TETARG,TREP,NCYCLE,NCCM,NALIVE,NNABT,NSUCC,NLATER,VDES,NTEST
  DATA (IHS33=1000000000000)
  CUSE      NCELL 22JUN71 *****
  COMMON/19501/NCELL,LINKM(700),STATUS(12000),COLAR(4000)
  CEND      NCELL *****
  C          CONTINUE
  C          GFT MISSILE TYPE DATA FOR THIS PARTICULAR TYPE OF MISSILE
  PNCMM = PINC(ITYPE)
  PNCACORT = 1. = PARCOT(ITYPE)
  PDEST = PDES(ITYPE)
  PFLTFAIL = PPF(ITYPE)
  TCF = TPCWER(ITYPE)
  TRETARG = TRET(ITYPE)
  IREP = 1
  EPS = TLINTH(ITYPE)
  NMIRV = 2. = NMIRV
  NTARG = NTARG/KMIRV
  C          RECORD EXECUTION OF MISSILE LAUNCH EVENT

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CALL HIST(1,1)
IF (I-REP) 2,3
2 IRP = IN(TYPE)
C SET MISSILE LAUNCH RESULT COUNTERS TO ZERO
3 NCYCLENCON=NALIVE=NABT=NSUCC=NLAFTER=NDE=0
C TRY TO LAUNCH A MISSILE
4 CALL TRYLAUN
C TEST IF ALL WEAPONS LAUNCHED
5 IF (NCYCLE .EQ. NWPNS) 51,9
C ALL WEAPONS LAUNCHED
51 CALL HIST(1,2)
C TEST FOR SUCCESSFUL LAUNCHES. IF ANY HANDCUMIZE TARGETS VS WEAPONS
6 IF (NSUCC .GT. 0) 7,10
7 CALL RANCHOER(NTST)
C MOVE WEAPON AND LAUNCH BASE DATA FROM INDATA TO OUTDATA
71 DO 8 I=1,NSUCC
I=INDX K=IN(I)
IN(I) = WPNUST(I)
INBASE = LAUNLIST(I)
GET INITIAL LAUNCH BASE HARDNESS AND SAVE IT
INITVULN=GET(ITVULN,INBASE,STATUS)
C TEMPORARILY SET HANDNESS TO 1
72 CALL PUT(ITVULN,INBASE,1,STATUS)
J=INDEX(I)
L=KMIRO(J-1)
C LABEL MISSILE WITH FIRST TARGET IN GROUP
INTAW=MLIST(L,1)/INSE3
TCPLT=MLIST(L,2)
DO 75 K=1,NMIRV
KX=2*K
MDATAC(K)=MLIST(L,KX-1)
TCPC(K)=FMLIST(L,KX)
75 CONTINUE
C SPACE INDIVIDUAL MISSILES BY EPS HOURS (EPS SMALL)
FUTIME=TIME+TPF+EPS*(J-1)
C SECOND MISSILE LAUNCH VS TARGET
CALL HIST(1,4)
C PLANT COMPLETE LAUNCH EVENT
8 CALL PLANTS(3,12)
C TEST IF ALL TARGETS ALREADY COVERED
C MISSILES LEFT OVER = ORIGINAL NUMBER LESS NUMBER PROCESSED
10 NLC = NWPNS - NCYCLE
IF (NLC .GT. 0) 11,99
C TEST IF ALL TARGETS COVERED
9 IF (NTST .EQ. NTARG) 91,4
C ALL TARGETS COVERED
91 CALL HIST(1,3)
GO TO 9
C SEE IF ANY TARGETS ARE LEFT FOR LATER
11 IF (NLATER .GT. 0) 12,99
C MOVE INDATA TO OUTDATA FOR PLANTING NEW LAUNCH EVENTS FOR THESE
12 DO 13 K=1,12
13 OUTDATA(K)=INDATA(K)
NWPNSG = NLC
NTARGG=NLAFTER+KMIW
DO 14 L=1,NLC

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FTNS.5

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LL=L*NCYCLE
M*PNLIST(L)=M*PNLIST(LL)
14 M*LAUNLIST(L)=M*LAUNLIST(LL)
DC 15 M=1*NLATEH
MS=K*IN*V*(M-1)
MM=M*NSUCC
JJ=INDEX(MM)
JS=K*IN*V*(JJ-1)
DC 15 LL=1*KNIRV
M*LIST(M*LL)=M*LIST(JS*LL)
15 CONTINUE
C NEW LAUNCH TIME IS CURRENT TIME PLUS TIME TO METARGET
FUTIME=TIME+TIMEARG
C RECORD PLANTING OF NEW LAUNCH EVENT
CALL HIST(1,0)
C PLANT NEW LAUNCH EVENT
CALL PLANTS(1,0)
99 RETURN
END

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100000
101000
102000
103000
104000
105000

IDENT MLAWN

00355
00004
01200
00003
00036
00001
00024
01560
00002
00041
54731

PROGRAM LENGTH:
ENTRY POINTS
BLOCK NAMES

MLAWN
EDATA
HISTAL
INDEX
INREP
KEYWORDS
MISSLE
TIME
TRYL
19501

EXTERNAL SYMBOLS

080DICT.
HIST
TRYLAUN
RANCHER
IGET
IPUT
PLANTS

5.4TS

MLAUN

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EU

J

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C0J014	NH0SC	00J00	00173	00173	00173
C0J514	NH0NS	00221	00222		
C0J014	NH0NSC				
C0J504	NH0P				
C0J004	NH0PC				
C0J000	OUTDATA	00217			
C0J120	PATCHI	00J14	00014		
C0J240	PUES	00J16	00016		
C0J024	PUEST	00J17	00017		
C0J025	PFLTFAIL	00J21	00021		
C0J300	PPPF	00J20	00020		
C0J000	PINC	00J11	00011		
C0J022	PINCMM	00J12	00012		
C0J200	PKMIS				
X0J007	PLANIS	00165	00311		
C0J023	PNCARGRT	00J15	00015		
X0J001	JS-GLCT.	00J00	00005		
X0J004	KA-CHUER	00J70			
C0J500	SIEC				
C0J000	SIEC	00J00	00113		
C15531	STATUS				
C0J515	TALM				
C0J015	TALC				
C0J020	TIME	00J57	00157	00303	00303
C0J320	TLLNIM	00J27	00027		
C0J532	TCP				
C0J001	TCFLT	00J26	00127		
C0J032	TCFC	00J47			
C0J024	TPF	00J23	00023	00160	00160
C0J520	TPMER	00J22	00022		
C0J020	TRET	00J24	00024		
C0J027	TRETAG	00J25	00025	00304	00304
X0J003	TRFLAUN	00J55			
P0J171	TS0001.	00J74			
P0J152	TS0002.	00J32			
P0J245	TS0004.	00J30			
P0J301	TS0005.	00J46			
P0J300	TS0006.	00J26			
C0J005	TUOLV	00J05	00112		
C0J514	WALIST	00J00	00101	00236	00237
P0J075	W0J001.	00J72	00172		
P0J135	W0J002.	00J51			
P0J216	W0J003.	00J20			
P0J233	W0J004.	00J24			
P0J247	W0J005.	00J02			
P0J266	W0J006.	00J77	00302		
00231	SY44CL5				

[illegible]

FTNS.5

CALL PLANT
50 RETURN
END

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45200
46000
47000

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2

5.415 MCNPRIN

PROGRAM LENGTH
ENTRY POINTS

MCNPRIN
OPTPRIN

BLOCK NAMES

EDATA
EVENT
MCNDAT
NSW
TIME

-- EXTERNAL SYMBOLS

THENT.
GDDICT.
PLANT
TSH.
STH.
ONSIAL.

IDENT MCNPRIN

00175
00035
00042
01200
00002
00001
00001
00002

5.ATS MCPHIN

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C00472	H								
P00164	REGIN.	00165							
P00163	CNVRT1.	00154							
P00173	COUNT.	00112							
P00027	CRFMT.	00064							
C00505	DGA								
C00005	DGC								
C00506	DGY								
C00006	DGYC								
C00507	DMCR								
C00007	DMCRG								
P00001	DICT.								
P00166	ENDING.								
P00000	EXIT.								
C00526	EXTRA								
P00027	FCHMAT.								
C00001	FUTIME								
P00006	GG00000.								
P00102	GG00001.								
P00174	I								
C00513	IALENT								
C00013	IALENTG								
C00517	IALT								
C00017	IALTG								
C00001	IBASE								
C00511	ICLASS								
C00011	ICLASSG								
C00524	INT								
C00024	INTG								
C00501	INBASE								
C00500	INDATA								
C00772	INDE								
C00272	INDEG								
C00000	INDEV								
C00001	INUF								
C00002	IND4								
C00652	INDP								
C00152	INDPC								
C00502	INDV								
P00164	INITIAL.								
C00503	INITAM								
C00514	INZONE								
C00014	INZONG								
C00512	IREG								
C00012	IREG								
C00510	ITYPE								
C00010	ITYPE								
C00112	ITYPE								
C00412	ITYPEG								
P00123	.15								
P00135	.20								
P00142	.30								
P00144	.40								

5.415 MGNP-IN

C00426 X00ZC
C00026 XX
P00015 Y
C01142 Y00Z
C00442 Y00ZC
C01156 Z00Z
C00456 Z00ZC
00161 SYWCLS

00057 00074 00121

01/03/12

EO

U

PAGE NO.

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SUMRCUTINE MSINPRIN
CSUBR MSINPRIN 10JUN71 *****
CUSE EDATAM 26AUG70 *****
COMMON/EDATA/SIDES,IRASE,IRON,INTAR,INTYP,DGAC,DGYS,DHCHC,
1 ITPC,ICLASSC,IREG,IALERT,NMTPC,NMNSC,NTARG,
2 MNPULIST(18),MLAUNLIST(18),MLIST(270),CUTDATA(320),
3 SIDE,INBASE,INDV,INTAR,INTYP,DGAC,DGYS,DHCHC,
4 ITPC,ICLASSC,IREG,IALERT,NMTPC,NTARG,
5 MNPULIST(18),MLAUNLIST(18),MLIST(270),INDATA(320)
6 TYPE INTEGER CUTDATA,SIDE,OSIDE,AAIM,TAIM,MPLIST
7 TYPE INTEGER DGAC,DGYS,DHCHC,DGAC,DGYS,DHCHC
8 TYPE INTEGER TAIM,AAIM
9 EQUIVALENCE (SIDES,CUTDATA(1)),(SIDE,INDATA(1))
10 EQUIVALENCE (IPAYLOAD,INDATA(5)),(NMIRV,INDATA(8))
11 EQUIVALENCE (INITVULG,CUTDATA(7)),(INITVULN,INDATA(7))
12 EQUIVALENCE (ITFC,CUTDATA(27)),(ITCF,INDATA(27))
13 DIMENSION MDATA(14),MDATAC(14),TCF(14),TCFC(14)
14 EQUIVALENCE (MDATAC,CUTDATA(13)),(MDATA,INDATA(13))
15 EQUIVALENCE (NMHUS,INDATA(15))
16 EQUIVALENCE (AAIM,INDATA(15))
17 EQUIVALENCE (TAIM,CUTDATA(14)),(AAIMC,CUTDATA(15))
18 EQUIVALENCE (NMHUSC,CUTDATA(13))
19 DIMENSION FMLIST(270)
20 EQUIVALENCE (FMLIST,FMLIST)
21 *****
CEND EDATAM *****
COMMON/IPSWICH/IPSW1,IPSW2,IPSW3,IPSW4,IPSW5,IPSW6
1,IPSW7
2 DIMENSION KLIST(14,7)
3 EQUIVALENCE (KLIST,INDATA(220))
25 PRINT 701,(INDATA(M),M=1,14)
PRINT 609
N = 1
JPNPS = NMPS
IF (JPNPS .LE. 14) 82,81
81 JPNPS = N + 13
82 IF (JPNPS .LT. NMPS) 84,83
83 JPNPS = NMPS
84 PRINT 702,(MNPULIST(M),M=N,JPNPS)
PRINT 609
IF (JPNPS .GE. NMPS) 86,85
85 N = JPNPS + 1
GC TO 81
86 IF (IPSW4 .EQ. 1) CH, IPSW5 .EQ. 1187,20
87 N=1
JTARG = NTARG
IF (JTARG .LE. 28) 92,91
91 JTARG=N+27
92 IF (JTARG .LT. NTARG) 94,93
93 JTARG = NTARG
94 NCOUNT=0
DO 96 M=N,JTARG,2
NCOUNT=NCOUNT+1
CALL MUNPK(MLIST(M))
KLIST(NCOUNT,1)=INTAR
KLIST(NCOUNT,2)=MLIST(M+1)

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KLIST(NCOUNT,3)=DGGX
KLIST(NCOUNT,4)=DYY
KLIST(NCOUNT,5)=DQOH
KLIST(NCOUNT,6)=TAINC
KLIST(NCOUNT,7)=TAINC
96 IF(I*PS=4) 97,98
97 PRINT 704,(KLIST(M,1),M=1,NCOUNT)
98 IF(I*PS=5) 99,100
99 PRINT 705,(KLIST(M,3),M=1,NCOUNT)
PRINT 707,(KLIST(M,4),M=1,NCOUNT)
PRINT 708,(KLIST(M,5),M=1,NCOUNT)
PRINT 709,(KLIST(M,6),M=1,NCOUNT)
PRINT 710,(KLIST(M,7),M=1,NCOUNT)
PRINT 609
100 IF(JIARG .GE. NTARG) 20,95
95 N = JTARG + 1
20 RETURN
701 FORMAT(78H INDATA ,3I8,F8.3,6I8/8X,6I8)
702 FORMAT(8H #PNLIST,14I8)
703 FORMAT(8H LAUNLIST,14I8)
704 FORMAT(8H TAILIST,14I8)
705 FORMAT(8H X ,14I8)
706 FORMAT(8H TDFLIST,14F8.3)
609 FORMAT(14H )
707 FORMAT(8H Y ,14I8)
708 FORMAT(8H Z ,14I8)
709 FORMAT(8H TAIM ,14I8)
710 FORMAT(8H AAIM ,14I8)
END

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5.ATS MSINPRIN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

MSINPRIN

EDATA
IPSWICH

EXTERNAL SYMBOLS

THENUL.
ORDDICT.
MUNPA
STM.
ONSINUL.

IDENT

U0470
00077

U1200
00007

MSINPRIN

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ED

U

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5.ATS MSINPRIN

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CO0516 AALH	00263	00105	00117	00122	00125	00146	00161	00164	00177	00202	00205
CO0016 AALMG	00263	00267	00311	00314	00327	00334	00367	00352	00365	00370	00403
PO0457 HEGIN.	00450	00455	00455	00455	00455	00455	00455	00455	00455	00455	00455
PO0456 CNVRTI.	00113	00154	00172	00304	00322	00342	00360	00370	00414	00432	00455
PO0003 CNFHT.	00455	00455	00455	00455	00455	00455	00455	00455	00455	00455	00455
CO0505 DGA	00256										
CO0005 DGA	00257										
CO0506 DGY	00257										
CO0006 DGY	00257										
CO0507 DQD	00250										
CO0007 DQD	00250										
PO0001 DICT.	00101	00105	00117	00122	00125	00146	00161	00164	00177	00202	00205
PO0461 ENDING.	00267	00276	00311	00314	00327	00334	00367	00352	00365	00370	00403
PO0000 EXIT.	00406	00421	00424	00437	00442	00445					
CO0562 FMLIST	00102	00454	00457								
PO0003 FCMAT.	00462										
PO0120 G00000.	00103										
PO0126 G000001.	00120										
PO0162 G000002.	00144										
PO0200 G000003.	00162										
PO0206 G000004.	00200										
PO0312 G000005.	00274										
PO0330 G000006.	00312										
PO0350 G000007.	00332										
PO0366 G000010.	00350										
PO0404 G000011.	00366										
PO0422 G000012.	00404										
PO0440 G000013.	00422										
PO0446 G000014.	00440										
CO0513 IALERT											
CO0013 IALERTC											
CO0001 IBASE											
CO0511 ICLASS											
CO0011 ICLASSC											
PO0217 IF00001.											
CO0501 INBASE											
CO0500 INDATA											
CO0002 INDM	00112	00112									
CO0502 INDV											
PO0457 INITIAL.	00102										
CO0506 INITVULN											
CO0006 INITVUL3											
CO0503 INTAR											
CO0504 IPAYLCAR	00251	00251									
CO0000 IPSW1											
CO0001 IPSW2											
CO0002 IPSW3											
CO0003 IPSW4											
CO0004 IPSW5											
CO0005 IPSW6											
CO0006 IPSW7											
CO0512 IREG	00215	00215	00272	00272	00272	00272	00272	00272	00272	00272	00272
	00217	00217	00330	00330	00330	00330	00330	00330	00330	00330	00330

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LD

U

PAGE NO.

5

CO0012	INREG								
CO0510	ITYPE								
CO0010	ITYPE								
P00446	.100	00331							
P00454	.20	00220	00450	00451					
P00103	.25								
P00134	.81	00133	00214						
P00136	.82	00132	00133						
P00142	.83	00140	00140						
P00144	.84	00141							
P00212	.85	00210							
P00215	.86	00210							
P00221	.87	00216	00211						
P00227	.91	00226							
P00231	.92	00225	00226						
P00235	.93	00233	00233						
P00237	.94	00234							
P00452	.95	00450							
P00263	.96								
P00274	.97	00273							
P00330	.98	00273							
P00332	.99	00331							
P00047	.009	00123	00203	00443					
P00003	.001	00109							
P00016	.002	00147							
P00023	.003	00105							
P00030	.004	00277							
P00035	.005	00335							
P00042	.006	00315							
P00053	.007	00353							
P00060	.008	00371							
P00065	.009	00407							
P00072	.010	00425							
P00250	.020001	00245							
CO0003	JNTAM								
P00463	JTAG	00224	00230	00231	00236	00270	00446	00452	
P00464	JMPS	00131	00135	00136	00143	00156	00174	00208	
CO1033	KLIST	00253	00256	00257	00260	00261	00282	00285	00212
		00321	00341	00341	00357	00357	00375	00375	00265
		00431							00413
CO0540	LAUNLIST	00171							
P00465	N	00110	00114	00151	00152	00155	00167	00170	00173
		00254	00301	00302	00305	00317	00320	00323	00340
		00355	00361	00373	00374	00377	00411	00412	00427
		00433							00415
CO0514	MDATA								
CO0014	MDATAC								
CO0040	MLAUNLIST								
CO0562	MLIST	00244	00250	00255	00255				
CO0062	MLISTC								
P00077	MSINPRIN	00077							
X00003	MUMPK	00246							
CO0016	MWPNLIST								
P00466	N	00127	00134	00150	00166	00213	00222	00227	00240
									00453


```

SUBROUTINE MUNPK(LOAT)
  CSUBR
    MUNPK      26AUG70
    COMMON/EDATA/ICUTD(320),INDATA(320)
    DATA (IRSH3=108), (IRSH12=100008)
    DATA (NEG=4008), (MASK=777777777777777700008)
    ICUTD(14)=IDAT.AND. 78
    I40=LOAT/IRSH3
    ICUTD(15)=I40.AND. 78
    I40=I40/IRSH3
    INDATA(8)=I40.AND. 78
    I40=I40/IRSH3
    INDATA(7)=I40.AND. 77778
    I40=I40/IRSH12
    INDATA(6)=I40.AND. 77778
    I40=I40/IRSH12
    INDATA(4)=I40.AND. 77778
    IF (INDATA(6).LT. NEG/2.1)
      1 INDATA(6)=INDATA(6).OR. MASK
      2 CONTINUE
    IF (INDATA(7).LT. NEG/4.3)
      3 INDATA(7)=INDATA(7).OR. MASK
      4 CONTINUE
    ICUTD(14)=ICUTD(14)+ICUTD(13)
    ICUTD(15)=ICUTD(14)+ICUTD(15)
    RETURN
  END

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1000
68000
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5.4TS

MUNPK

PROGRAM LENGTH
ENTRY PCINTS
BLOCK NAMES
EXTERNAL SYMBOLS

MUNPK
EDATA
C88DICT.

IUENT

UG127
U0007
U1200

MUNPK

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EU

U

PAGE NO.

2

SATS

MUNPK

3

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J

P00071 BEGIN.
 P00001 DICT.
 P00110 ENDING.
 P00000 EXIT.
 P00013 FPU0001.
 P00016 FPU0002.
 P00124 GETPL.
 P00114 GETPU.
 P00007 IDAT.
 C00500 INDATA
 P00071 INITIAL.
 C00000 ICUTV.
 P00004 IRSH12
 P00003 IRSH3
 P00126 IWD
 P00053 .1
 P00056 .2
 P00062 .3
 P00065 .4
 P00006 MASK
 P00007 MUNPK
 P00005 NEG
 P00107 PFU0002.
 A00001 ORWDICT.
 C00300 SY4-CLS

00107
 00011
 00012
 00113
 00103
 00109
 00076
 00101
 00013
 00030
 00030
 00055
 00016
 00045
 00026
 00021
 00021
 00051
 00052
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 00061
 00063
 00057
 00102
 00000

00121
 00075
 00071

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 00073
 00073

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00016

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00051

FTNS.5

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PAGE NO.

1

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SURROUTINE NAVATH
  CSUBR  NAVATR 28APR71 *****
  COMMON/EUATA/CUATA(320),SIDE,INBASE,NCOL,INCOL(5),IYPE,ICLASS,
  (IREG,IALERT,INDATA(320)
  EQUIVALENCE(SIDE,INDATA(1))
  COMMON/KEY4ORDS/KEYARNAY(20)
  EQUIVALENCE (KEYARNAY(1),TSTAT)
  CUSE  NCCELL 22JUN71 *****
  COMMON/19501/NCCELL,LINKM(700),STATUS(12000),COLAR(4000)
  CEND  NCCELL *****
  CALL HIST(21,1)
  CALL HIST(21,2)
  CALL IPUT(TSTAT,INBASE,0,STATUS)
  DO 1 I=1,NCOL
  IC=INCOL(I)
  1 CALL IPUT(TSTAT,IC,0,STATUS)
  END

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7100
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10000
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12000
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14000

SATS

NAVATR

01/03/72

EU

U

PAGE NO.

2

NAVATR

IDENT

00066

00003

PROGRAM LENGTH

ENTRY POINTS

BLOCK NAMES

NAVATH

EDATA

KEYCRUS

19501

01200

00324

54731

EXTERNAL SYMBOLS

0800DICT.

HIST

INPUT

5.475

NAVAIR

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EU

U

PAGE NO.

3

P00036 MEGIN. 00036
 C45071 COLAN 00005
 P00001 DICT. 00006
 P00037 ENDING. 00037
 P00000 EXIT. 00007
 X00002 HIST 00012
 P00044 I 00022
 C00513 TALENT 00023
 P00045 IC 00025
 C00511 ICLASS 00025
 C00501 INBASE 00017
 C00503 INCCL 00024
 C00500 INDATA 00024
 P00036 INITIAL. 00005
 X00003 IPUT 00015
 C00512 IREG 00026
 C00510 ITYPE 00005
 P00026 .10 00026
 C00000 KEYARRAY 00005
 C00001 LINKM 00003
 P00003 NAVAIR 00003
 C00000 NBCELL 00033
 C00502 NCCL 00033
 C00000 GUIDATA 00000
 X00001 GRDICT. 00000
 C00500 SIDE 00020
 C15531 STATUS 00031
 P00033 TSU0001. 00022
 C00000 TSTAI 00017
 P00023 TSU0001. 00034
 00036 SYMCLS

00016

00013

00010

00005

00001

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00032

00012

00022

00023

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00017

00024

00026

00005

00015

00026

00003

00033

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00020

00022

00017

00034

00034

00034

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CSUBR      SUBROUTINE NAVCAL
            NAVCAL 28A0971
            COMMON/EDATA/GUTDATA(320),SIDE,INBASE,NCOL,INCOL(5),ITYPE,ICLASS,
            1 IREG,IALERT,INDATA(320)
            EQUIVALENCE (SIDE,INDATA(1))
            COMMON/KEYWORDS/KEYARRAY(20)
            EQUIVALENCE (KEYARRAY(2),TCGL),(KEYARRAY(9),KEYNTA),(KEYARRAY(18),
            1 KEYTIN),(KEYARRAY(18),NAVDBL)
            COMMON/NAVDATA/PK(10,10),TK(10,10)
            COMMON/NAVDBOUT/NAVDBOUT
            COMMON/TIME/TIME,FUTIME
            CUSE    NBCELL 22JUN71
            CEND    NBCELL *****
            JD=NCOL
            C      AT THIS POINT NCOL=IDBL, THE INDEX TO THE NAVDATA TABLES
            NCOL=J
            C      NOW NCOL IS NUMBER OF TARGETS COLOCATED WITH THE BASE
            MAXIMS=10
            C      MAXIMS IS MAXIMUM NUMBER OF ENTRIES IN EACH TIME DEPENDENT
            C      DBL DATA TABLE
            CALL MIST(20,1)
            C      1 KDBL=IGET(NAVDBL,INBASE,STATUS)
            C      2 IF (KDBL)13,3
            C      3 CALL IPUT(NAVDBL,INBASE,1,STATUS)
            C      4 IF (KCOL)17,5
            C      5 PERMANF(-1)
            C      6 UC 12 1=1,MAXIMS
            C      7 IF (P.GT.PK(1,0))12,8
            C      8 IF (1.GT.111)9
            C      9 PX=0.
            C      TX=C.
            C      GC TO 11
            C      10 PX=PK(1,1,JD)
            C      TX=TK(1,1,JD)
            C      11 WARP=PAI/(PK(1,0)-PX)
            C      TX=TX+(TK(1,0)-TX)
            C      GC TO 14
            C      12 CONTINUE
            C      13 NAVDBOUT=0
            C      RETURN
            C      PLANT DESTRUCTION EVENT
            C      14 FUTURE=TIME+Y
            C      15 CALL MIST(2,2)
            C      16 CALL PLANTS(21,12)
            C      RETURN
            C      FIND COLOCATED PLANTS
            C      17 NT=1
            C      KIND=IFIND(INBASE)
            C      18 NTA=IGET(KEYNTA,KIND,COLAR)

```

FTNS.5

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PAGE NO. 2

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19 IF (NTA) 20, 21, 20
20 KIND=KIND-NTA
21 KIND=KIND+1
   INEXT=IGET(KEYIN,KIND,COLAR)
22 IF(INEXT.EQ.INBASE)23
23 CALL IPUT(NAVDHL,INEXT,1,STATUS)
   INCOL(KT)=INEXT
   NCCL=KT
   K=KT+1
24 IF(KT.GT.5)25,18
25 PRINT 101,INBASE
101 FORMAT(37H ICC : MY TARGETS COLLOCATED WITH BASE,IS,
1 10H IN NAVDHL
   GC TO -
   END

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62000
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67000
68000

SATS NAVCAL

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

NAVCAL

EDATA
KEYWORDS
NAVDATA
NWCROGUT
TIME
19501
EXTERNAL SYMBOLS
THEND.
PRODUCT.
MIST
IGET
IPUT
PLANTS
IFIND
RAME
STH.
JNSINGOL.

IDENT

NAVCAL

00276
00317
01200
00024
00310
00001
00002
54731

S.475

NAVCAL

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EU

J

PAGE NO.

4

P00246	RESIN.	00246							
P00222	CNVRTI.	00215							
C45071	CLAM	00152							
P00003	CRMT.	00220							
P00001	DICT.	00021	00035	00044	00050	00061	00133	00136	00144
		000173	00217						
P00247	ENDING.	00022	00140						
P00000	EXIT.	00247							
P00003	FCMAT.								
C00001	FUTIME	00131							
P00220	GG00000.	00210							
X00003	HIST	00031							
P00260	I	00084	00121	00231					
C00513	IALEMT								
C00511	ICLASS								
X00007	IFIND	00143							
X00004	IGET	00047	00147	00162					
P00223	IND0001.	00070	00110	00224	00234	00244	00214	00214	
C00501	INBASE	00046	00051	00145	00170	00170			
C00503	INCOL	00177	00200						
C00500	INDATA								
P00261	INEXT	00166	00174	00176					
P00246	INITIAL.	00022							
X00005	INPUT	00043							
C00512	INEG								
C00510	ITYPE								
P00034	.1	00034							
P00101	.10	00075							
P00106	.11	00100							
P00121	.12	00072							
P00125	.13	00042							
P00127	.14	00120							
P00132	.15								
P00135	.16								
P00141	.17								
P00147	.18	00155							
P00154	.19	00206							
P00041	.2								
P00156	.20	00155							
P00160	.21	00155							
P00167	.22								
P00172	.23	00171							
P00205	.24								
P00210	.25								
P00043	.3								
P00054	.4								
P00056	.5	00171	00220						
P00063	.6								
P00067	.7								
P00073	.8	00071	00072						
P00076	.9	00074	00075						
P00250	ERASER.	00057	00107						
P00003	.101	00012	00113	00113					
P00262	JU	00024	00240						

PO0263 KCGL	00053	00054			
PO0264 KDHL	00060	00061			
CU0000 KEYARRAY					
CU0010 KEYNTA	00151				
CU0007 KEYTIN	00164				
PO0265 KING	00146				
PO0266 KT	00142				
CU0001 LINKA					
PO0267 MAATINS	00030				
PO0017 NAVCAL	00017				
CU0021 NAVDBL	00136				
CU0000 NRCELL					
CU0502 NCCL	00023				
PO0270 NTA	00153				
CU0000 NRCROGUT	00125				
CU0000 GUTOATA					
PO0271 P	00062				
PO0224 P00000.0	00226				
CU0000 PK	00070				
X00006 PLANTS	00135				
PO0272 PX	00077				
X00002 QRODICT.	00000				
X00012 QMSINGL.	00221				
PO0273 R	00114				
X00010 RANF	00060				
CU0500 SIOE					
C15531 STATUS	00037				
X00011 STM.	00211				
PO0274 T	00117				
CU0001 TCCL	00051				
X00001 TEND.	00216				
CU0000 TIME	00127				
CU0144 TK	00104				
PO0123 T500001.	00066				
PO0275 TX	00100				
PO0230 UP00000.	00095				
PO0237 UP00001.	00025				
PO0067 W500001.	00126				
00133 SYMBOLS					

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PAGE NO.

1

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SURROUTINE NEXTEVNT
CSURR NEXTEVNT 21UECTO *****
C DETERMINES AREA ATTRITION AND PLANTS NEXT BOMBER EVENT
COMMON/ATTRIT/FK,FCM,ALT,CON,RPEN
COMMON/QUATA/ISIZE
CUSE EDATAR 4JAN71 *****
COMMON/EDATA/SIDEG,IBASE,INDM,JNTIAT,NNTYPC,DGXC,DGYC,DHCHC,ITYPC,
1 ICLASS,IREGG,IALERTC,INZNG,NDHIC,NULCO,IALTS,NMWC,PKNAV,SPG(12),
2 IHTG,JHTC,XX(2),NALT,ITABCHTC,TING(80),INDPG(80),INDEG(80),
3 INTYPC(12),XDGG(12),YDGG(12),ZDGG(12),S(6),CUTDATA(320),SIDE,
* INBASE,INDV,INTAR,NNTYP,DGX,DGY,DHCHC,ITYPC,ICLASS,IREG,IALERT,
5 INZNG,NDHIC,NULCO,IALTS,NMWC,PKNAV,SPARE(2),INT,INT,EXTNA(2),NALT,
6 STARGT,TING(80),INDP(80),INCE(80),INTYPC(12),XDGG(12),YDGG(12),
7 ZDGG(12),INDATA(320)
EQUIVALENCE (SIDEG,CUTDATA(1)), (SIDE,INDATA(1))
EQUIVALENCE (NPLAN,NALT), (NHT,INT), (NWT,JNT)
TYPE INTEGER DUX,DY,DHCHC,XDGG,YDGG,ZDGG
TYPE INTEGER DUXC,DGYC,DHCHC,XDGGC,YDGGC,ZDGGC
TYPE INTEGER CUTDATA,SIDE,SIDEG
CEND EDATAR *****
COMMON/EPSN/EPSN
COMMON/TIME/TIME,FUTIME
COMMON/ZONES/AREA(63),ZDEFPOT(63),ZCUPOT(63),NPENZ(63),KILLZ(63),
1 MAXZONE(2)

C CHECK IF ANY MORE EVENTS
IF (INT.LE. 1) 5,1
C MOVE POINTER TO NEXT HISTORY TABLE EVENT OF THE BOMBER
1 INT=INT-1
C TEST IF OUTSIDE ENEMY TERRITORY
2 IF (INZONE.GT. 2.AND.ICLASS.EQ. 2) 20,3
C NEXT EVENT FROM HISTORY TABLE
3 KEVENT = INDE(INT)
F = 1.0
GO TO 5
C NEXT EVENT AREA ATTRITION
4 KEVENT = 7
F = NAME(-1)
C COMPUTE EXECUTION TIME OF NEXT SCHEDULED EVENT
5 FUTURE = TIME + F * TINC(INT)
C TEST IF BOMBER ABOUT TIME LATER THAN NEXT EVENT TIME
6 IF (TARGT.GE. FUTURE*EPSN) 8,7
C PLANT BOMBER ABOUT EVENT
7 FUTURE = TARGT
CALL PLANTS(13,ISIZE)
RETURN
C PLANT NEXT EVENT FOR BOMBER
8 CALL PLANTS(KEVENT,ISIZE)
9 RETURN
C IN ENEMY TERRITORY -- CHECK FOR AREA ATTRITION
20 IF (TINC(INT).EQ. 0) 3,22
22 NPEN = NPENZ(INZONE)
UEF = ZDEFPOT(INZONE) * 1.
23 UP = F*OTING(INT)*UEF*FCM*NDHIC*ALT*JALT/AREA(INZONE)
24 FC = 1.0 - CONEXP(1-ZCUPOT(INZONE)/UEF)
25 PSAT = (1. - EXP(-NPEN*NPEN))/NPEN

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FTN5.5

DPH = DREFCPSAT
SURVP = EXPF(-DPH)
TEST IF BOMBER SURVIVES AREA DEFENSES
26 IF(SURVP .GE. HANF(-1)) 300
END

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2

4100
42000
43000
44000
45000

5.4TS NEXTEVNT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

NEXTEVNT

ATTRIT

DATA

EDATA

EPSN

TIME

ZONES

EXTERNAL SYMBOLS

Q200711J

Q1004100

Q1005100

QNDICT.

PLANTS

RANF

EXP

IDENT

U0172

J0003

U0005

U0001

J1200

J0001

U0002

U0475

NEXTEVNT

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EU

9

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3

5.ATS NEXTENT

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CU0002 ALT	00103	00103						
CU0000 AREA	00106	00107						
CU0472 H								
PU0151 BEGIN.	00152							
CU0703 CSN	00117							
PU0161 DEF	00370	00100	00113					
CU0505 DGA								
CU0005 DGA								
CU0506 DGY								
CU0006 DGY								
CU0507 DHC								
CU0007 DHC								
PU0001 DICT.	00005	00032	00050	00054	00072	00102	00116	00127
PU0162 DP	00110	00133						
PU0163 DPH	00135	00135						
PU0153 ENDING.	00006	00052	00056	00151				
CU0000 EPSN	00042	00042						
PU0000 EXIT.	00154							
CU0007 EXPF	00115	00126	00137					
CU0526 EXTRA	00025	00033	00034					
PU0164 F	00121	00134						
PU0165 FC	00073	00073						
CU0001 FCM	00075	00075						
CU0000 FK	00037	00041	00046	00046				
CU0001 FUTURE								
CU0513 IALERT	00104	00104						
CU0013 IALERT								
CU0517 IALT								
CU0017 IALT								
CU0001 IBASE								
CU0511 ICLASS	00017	00017						
CU0011 ICLASS								
PU0017 IFU001.								
CU0524 IHI	00007	00007	00012	00012	00013	00022	00022	00035
	00076	00076						
CU0024 INFO								
CU0501 INBASE								
CU0500 INDATA								
CU0772 INDE	00023							
CU0272 INDE								
CU0002 INU								
CU0652 INDP								
CU0152 INDP								
CU0502 INUV								
PU0151 INITIAL.	00005							
CU0503 INTAK								
CU0514 INZONE	00014	00014	00063	00063	00105	00106	00111	00111
CU0014 INZNG								
CU0512 IREG								
CU0012 IREG								
CU0000 ISIZE								
CU0510 ITYPE	00051	00055						
CU0010 ITPC								
CU0112 ITPC								

SATS NEXTEVNT

CU0412 INTYPE
 PU0012 .1
 PU0014 .2
 PU0057 .20
 PU0063 .22
 PU0071 .23
 PU0111 .24
 PU0122 .25
 PU0142 .26
 PU0022 .3
 PU0026 .4
 PU0034 .5
 PU0043 .6
 PU0045 .7
 PU0053 .8
 PU0056 .9
 PU0155 EHASER.
 CU0003 JNIR
 CU0525 JMT
 PU0166 KEVENT
 CU0374 KILLZ
 CU0473 MARZONE
 CU0524 MHI
 CU0525 MHI
 CU0530 NALT
 CU0030 NALT
 CU0520 NCM
 CU0020 NCM
 CU0515 NDHI
 CU0015 NDHI
 CU0516 NDLC
 CU0016 NDLC
 PU0003 NEXTEVNT
 PU0167 NPEN
 CU0275 NPEN
 CU0533 NPLAN
 CU0504 NTYPE
 CU0004 NTYPE
 CU0000 CUDATA
 CU0521 PKNAV
 CU0021 PKNAV
 X00005 PLANTS
 PU0170 PSAT
 X00002 Q1404100
 X00003 Q1455100
 X00001 Q2437110
 X00004 QBDICT.
 X00006 HANF
 CU0004 RPN
 CU0500 SIEC
 CU0000 SPARE
 CU0522 SPQ

00011
 00021
 00061
 00015
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 00010
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 00003
 00005
 00064
 00047
 00133
 00123
 00131
 00071
 00000
 00031
 00144
 00122

00016 00020 00062 00147 00150

00044
 00011
 00100 00105 00114 00125 00136 00143

00027 00055

00074

00124 00132 00064

00053 00134

00101 00004 00144 00122

5.4TS NEXTENT

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000171 SURV	00141	00146	00045	00045
000531 TACHT	00040	00040		
000031 TACHTC				
000000 TIME	00036	00037		
000532 TIME	00036	00060	00077	
000032 TIME				
001126 X02				
000426 X02C				
000026 XX				
001142 Y02				
000442 Y02C				
000176 ZCCPCT	00112	00112		
000077 Z0EFPCT	00066	00066		
001156 Z02				
000456 Z02C				
00172 SY45CL5				

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SURROUTINE PLANT
CSURR      PLANT      10JUN71 *****
COMMON/ESTOR/SCALE11,IMAX,NCHDS,N0,IND,NEATEV,MERGS#
1  INUATP(1320),LCOUTP(320),ISVQAT(320),MENTIM,TAPET(110),SVTIME(110)
2  ,ITCGC(110)
COMMON/LISTMEM/IAVAIL
COMMON/TIME/TIME,FUTIME
EQUIVALENCE(FUTIME,IFUTIME)
CUSE      NRCCELL      22JUN71 *****
COMMON/19501/NRCCELL,LINKM(7000),STATUS(12000),COLAP(4000)
CEND      NRCCELL *****
COMMON/EVENT/INDEV,INDF
COMMON/EVINDX/NBIND,EVENTIME(110),INDEV(110)
DATA(INHIND=10)
UTENSION EVENTIME(110)
EQUIVALENCE(EVENTIME,IEVTIME)
COMMON/NEVTCT/NMEVTCT,NCTH
DATA(NDEVCT=0),NCTR=0)
DATA(NEVCY=200)
EQUIVALENCE(XTIME,ITIME)
C          PACK OUTDATA
C          CALL EVPACK
C          TEST LIST FULL
C          IF(IAVAIL(6,50)=6
C            CHECK NOT IN PAST
C          6  IF(FUTIME-TIME)52,7,7
C            CHECK NOT EXCEED TMAX
C          7  IF(FUTIME-TMAX)8,40,40
C          8  CONTINUE
C          IAVS=IAVAIL
C          IAVAIL=LINKM(IAVS)
C          IF(IAVAIL(6,0)=9
C            INSERT HEADER WORD
C          9  LINKM(IAVS)=IFUTIME
C            LINKM(IAVS+1)=INDEV
C            LINKM(IAVS+2)=INDF
C            IF(NCHDS .LE. 0) 73,72
C          70 LINKM(IAVS+4)=0
C          71 CONTINUE
C          LINKM(IAVS+4)=IAVAIL
C          TRANSFER DATA TO LIST MEMORY
C          CALL UNSQUEEZ
C          INSERT EVENT INTO LIST
C          71 CONTINUE
C          FIND SURLIST TO WHICH EVENT IS TO BE ADDED
C          DO 10 I=1,NBIND
C            IF(FUTIME .LT. EVENTIME(I))11,10
C          10 CONTINUE
C          I=NBIND
C          ADD TO SURLIST I
C          11 IST=INDEV(1)
C            ISX=1
C            IPX=0
C            IF(IST.EQ.0)12,14
C          12 START NEW SURLIST WITH CURRENT EVENT

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5500
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9000
1000
9000
12000
13000
14000
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37000
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39000
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12 INDEVB(1SX)=IAVS
   EVTIME(1SX)=FUTIME
   LINKM(IAVS+3)=0
   GO TO 30
C   START SCAN AT EVENT 1ST
C   IPX = INDEX TO PREVIOUS EVENT
C   IST = INDEX TO CURRENT EVENT
C   FIND TIME IN SUBLIST 1 GREATER THAN OR EQUAL TO TIME OF THIS EVENT
14 CONTINUE
   ITIME=LINKM(IST)
   IF(FUTIME-ITIME)16,16,15
15 IPX=IST
   IST=LINKM(IPX+3)
   IF (IST) 14, 20, 14
16 CONTINUE
   IF(IPX.EQ.0)17,18
C   MAKE CURRENT EVENT FIRST IN SUBLIST 1
17 CONTINUE
   LINKM(IAVS+3)=IST
   INDEVB(1SX)=IAVS
   GO TO 30
C   INSERT CURRENT EVENT IN MIDDLE OF SUBLIST 1
18 CONTINUE
   LINKM(IAVS+3)=IST
   LINKM(IPX+3)=IAVS
   GO TO 30
C   ADD CURRENT EVENT TO END OF SUBLIST 1
20 CONTINUE
   LINKM(IAVS+3)=0
   LINKM(IPX+3)=IAVS
   EVTIME(1SX)=FUTIME
30 CONTINUE
C   SET TIME OF NEXT EVENT IN MEMORY
34 NEXTEV=INDEVB(1)
   IF(NEXTEV.EQ.0)35,36
35 CALL UPDIR
   NCTR=J
   NEXTEV=INDEVB(1)
36 NEXTIM=LINKM(NEXTEV)
   NEXTCTR=NREVTCT+1
   NCTR=NCTR+1
   IF(NCTR=NEVC)40,40,31
C   UPDATE ENTRY POINT DIRECTORY.
31 CALL UPDIR
   NCTR=J
40 CONTINUE
   RETURN
C   HERE LIST MEMORY FULL.
50 CALL EVSPILL
   IF(IAVAIL)6,51,6
51 CALL ERHCL(10)
   RETURN
C   PUT TIME EARLIER THAN TIME
52 CALL ERHCL(21)
   RETURN
60 CONTINUE

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126000

FTN5.5

CALL EVSPILL
IF (JAVAIL.EQ.0)61.9
61 CALL ENKOL(11)
RETURN
END

01/03/72

PAGE NO.

3

127000
128000
129000
130000
131000

5.ATS

PLANT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

PLANT

ESTOR
LISTMEM
TIME
19501
EVENT
EVINOK
NEVTCT

EXTERNAL SYMBOLS

0800ICT.
EVPACK
UNSQUEEZ
UPDTH
EVSOLL
ERRCL

IDENT

00241
00005
J1746
00001
00002
54:31
00002
00025
00002

PLANT

01/03/72

EU

PAGE NO.

4

SATS	PLANT	01/03/72	ED	J	PAGE NO.	5
P00225	BEGIN.					
C45071	COLAM					
P00001	DICT.					
P00227	ENDING.					
X00006	ERRCL					
X00002	EVPAK					
X00005	EVSPILL					
C00001	EVTIME					
P00000	EXIT.					
C00001	FUTIME					
P00234	I					
C00000	IAVAIL					
P00235	IAVS					
C00001	IEVTIME					
C00001	IFUTIME					
C00007	INDATP					
C00000	INDEV					
C00013	INDEVR					
C00001	INDF					
P00225	INITIAL.					
C00507	ICUTIP					
P00236	IPA					
P00237	IST					
C01207	ISVDAT					
P00240	ISA					
P00003	ITIME					
C01734	ITSGC					
P00063	.10					
P00070	.11					
P00077	.12					
P00107	.14					
P00115	.15					
P00123	.16					
P00125	.17					
P00133	.18					
P00141	.20					
P00151	.30					
P00173	.31					
P00151	.34					
P00154	.35					
P00162	.36					
P00177	.40					
P00200	.50					
P00205	.51					
P00211	.52					
P00015	.6					
P00215	.60					
P00221	.61					
P00020	.7					
P00044	.70					
P00054	.71					
00226						
00007						
00010						
00205						
00011						
00200						
00060						
00230						
00015						
00146						
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00013						
00217						
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00142						
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00076						
00114						
00124						
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00106						
00153						
00022						
00014						
00203						
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00171						
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00123						
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00174						
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00144						
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00070						
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00045						
00077						
00104						
00126						
00130						
00134						
00136						

SATS	PLANT	01/03/72	ED	PAGE NO.	6
P00047 .72	00043				
P00024 .8	00022				
P00032 .9	00031				
C00001 LINKM	00026				
	00051				
	00137				
	00164				
C01707 MENTIM	00034	00036	00040	00045	00051
C00006 MEMSW	00034	00036	00040	00045	00051
C00000 MBCELL	00034	00036	00040	00045	00051
C00000 MBVTGT	00034	00036	00040	00045	00051
C00000 MBIND	00034	00036	00040	00045	00051
C00001 NCTR	00034	00036	00040	00045	00051
C00004 NDIRD	00034	00036	00040	00045	00051
P00004 NEVCY	00034	00036	00040	00045	00051
C00005 NFATEV	00034	00036	00040	00045	00051
C00003 NMCROS	00034	00036	00040	00045	00051
P00005 PLANT	00034	00036	00040	00045	00051
X00001 GRNDICT.	00034	00036	00040	00045	00051
C00000 SCALET	00034	00036	00040	00045	00051
C00001 SCALETI	00034	00036	00040	00045	00051
C15531 STATUS	00034	00036	00040	00045	00051
C01722 SVTIME	00034	00036	00040	00045	00051
C01710 TAPET	00034	00036	00040	00045	00051
C00000 TIME	00034	00036	00040	00045	00051
C00002 IMAX	00034	00036	00040	00045	00051
P00004 TS00001.	00034	00036	00040	00045	00051
X00003 UNSQUEEZ	00034	00036	00040	00045	00051
X00004 UPDIR	00034	00036	00040	00045	00051
P00056 *SU0001.	00034	00036	00040	00045	00051
P00003 XTIME	00034	00036	00040	00045	00051
00117 SYM-CLS					

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C      CSURR      SUBROUTINE PLANTS(K,L)
C      PLANTS      10JUN71
C      COMMON/DATA/ISIZE
C      MOVES INDATA TO OUTDATA FOR PLANTING AND CALLS PLANT
C      EDATAX      26AUG70
C      COMMON/EDATA/OUTDATA(320),INDATA(320)
C      TYPE INTEGER OUTDATA
C      EDATAX
C      COMMON/FUTPRINT/IFUT
C      COMMON/EVENT/INDEV,INUF
C      COMMON/TIME/TIME,FUTIME
C
C      MOVE FIRST L WORDS OF INDATA TO OUTDATA FOR PLANTING
C      DO 99 I=1,L
C      OUTDATA(I)=INDATA(I)
C      CONTINUE
C      TEST SWITCHES CONTROLLING FUTIME PRINTOUT
C      IF (IFUT.EQ.0) 98,97
C      CALL FOR PRINTOUT OF EXECUTION TIME OF EVENT TO BE PLANTED
C      97 FTIME = FUTIME-24.
C      PRINT 971,FTIME
C      971 FORMAT(5X,10H NEXT EVENT AT,F9.4)
C      98 KK = K + 1
C      INDEV = K
C      PLANT AN EVENT OF TYPE K FOR EXECUTION AT TIME FUTIME
C      GO TO (91,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,91)
C      11 KK
C      1 INDF = 1 $ GO TO 50
C      2 INDF = 2 $ GO TO 50
C      3 INDF = 3 $ GO TO 50
C      4 INDF = 2 $ GO TO 50
C      5 INDF = 2 $ GO TO 50
C      6 INDF = 8 $ GO TO 50
C      7 INDF = 2 $ GO TO 50
C      8 INDF = 2 $ GO TO 50
C      9 INDF = 4 $ GO TO 50
C      10 INDF = 5 $ GO TO 50
C      11 INDF = 2 $ GO TO 50
C      12 INDF = 2 $ GO TO 50
C      13 INDF = 2 $ GO TO 50
C      14 INDF = 2 $ GO TO 50
C      15 INDF = 2 $ GO TO 50
C      16 INDF = 2 $ GO TO 50
C      17 INDF = 2 $ GO TO 50
C      18 INDF = 6 $ GO TO 50
C      19 INDF = 2 $ GO TO 50
C      20 INDF = 7 $ GO TO 50
C      21 INDF = 7 $ GO TO 50
C      50 CALL PLANT
C      RETURN
C      IF ILLEGAL EVENT TYPE, PRINT DIAGNOSTIC AND ABORT
C      91 PRINT 191, K, TIME, FUTIME
C      PRINT 192
C      PRINT 193, (INDATA(I), I=1,ISIZE)
C      PRINT 194
C      PRINT 195, (OUTDATA(I), I=1,ISIZE)

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PTN5.5

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2

191 FORMAT(19H ILLEGAL EVENT TYPE,13.7H TIME =F9.4,9H FUTURE =F9.4)
192 FORMAT(79H INDATA=--/)
193 FORMAT(5020)
194 FORMAT(710H OUTDATA=--/)
CALL ZABORT
END

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5.ATS PLANTS

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

PLANTS
DATA
EDATA
FUTPRINT
EVENT
TIME

EXTERNAL SYMBOLS

THEND.
QBODICT.
PLANT
ZABCHT
STM.
ONSINGL.

IDENT

00350
00051
00001
01200
00001
00002
00002

PLANTS

01/03/72

EU

U

PAGE NO.

3

SATS

PLANTS

4

PAGE NO.

U

EU

01/03/72

SATS	PLANTS	00324	00332	00336	00220	00241	00265	00225	00230	00233	00246	00251
P00300	RESIN.	00324	00332	00336	00220	00241	00265	00225	00230	00233	00246	00251
P00277	CNVRT1.	00100	00215	00217	00273	00273	00273	00273	00273	00273	00273	00273
P00343	CNVRT1.	00061	00062	00062	00062	00062	00062	00062	00062	00062	00062	00062
P00003	CRMT.	00103	00273	00273	00273	00273	00273	00273	00273	00273	00273	00273
P00001	DICT.	00053	00076	00102	00206	00212	00222	00222	00230	00233	00246	00251
P00325	ENDING.	00054	00257	00272	00274	00303	00304	00304	00304	00304	00304	00304
P00000	EXIT.	00054	00207	00275	00300	00301	00301	00302	00302	00302	00302	00302
P00000	EXIT.	00330	00207	00275	00300	00301	00301	00302	00302	00302	00302	00302
P00003	FCMAT.	00322	00323	00323	00323	00323	00323	00323	00323	00323	00323	00323
P00057	FP00001.	00312	00313	00313	00313	00313	00313	00313	00313	00313	00313	00313
P00103	FP00002.	00314	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315
P00106	FP00003.	00316	00317	00317	00317	00317	00317	00317	00317	00317	00317	00317
P00214	FP00004.	00318	00319	00319	00319	00319	00319	00319	00319	00319	00319	00319
P00344	FTIME	00073	00100	00100	00100	00100	00100	00100	00100	00100	00100	00100
C00001	FUTIME	00071	00071	00071	00071	00071	00071	00071	00071	00071	00071	00071
P00341	GETPL.	00305	00320	00320	00320	00320	00320	00320	00320	00320	00320	00320
P00331	GETPU.	00310	00320	00320	00320	00320	00320	00320	00320	00320	00320	00320
P00103	GG00000.	00374	00374	00374	00374	00374	00374	00374	00374	00374	00374	00374
P00223	GG03001.	00210	00210	00210	00210	00210	00210	00210	00210	00210	00210	00210
P00231	GG03002.	00223	00223	00223	00223	00223	00223	00223	00223	00223	00223	00223
P00247	GG03003.	00231	00231	00231	00231	00231	00231	00231	00231	00231	00231	00231
P00255	GG03004.	00247	00247	00247	00247	00247	00247	00247	00247	00247	00247	00247
P00273	GG03005.	00255	00255	00255	00255	00255	00255	00255	00255	00255	00255	00255
P00345	I	00356	00356	00356	00356	00356	00356	00356	00356	00356	00356	00356
C00000	IFUT	00066	00066	00066	00066	00066	00066	00066	00066	00066	00066	00066
P00346	IGSTC.	00111	00111	00111	00111	00111	00111	00111	00111	00111	00111	00111
C00500	INDATA	00063	00063	00063	00063	00063	00063	00063	00063	00063	00063	00063
C00000	INDEV	00107	00107	00107	00107	00107	00107	00107	00107	00107	00107	00107
C00001	INUF	00133	00133	00133	00133	00133	00133	00133	00133	00133	00133	00133
P00300	INITIAL.	00146	00146	00146	00146	00146	00146	00146	00146	00146	00146	00146
C00000	ISIZE	00161	00161	00161	00161	00161	00161	00161	00161	00161	00161	00161
P00133	.1	00174	00174	00174	00174	00174	00174	00174	00174	00174	00174	00174
P00155	.10	00182	00182	00182	00182	00182	00182	00182	00182	00182	00182	00182
P00157	.11	00122	00122	00122	00122	00122	00122	00122	00122	00122	00122	00122
P00161	.12	00123	00123	00123	00123	00123	00123	00123	00123	00123	00123	00123
P00163	.13	00123	00123	00123	00123	00123	00123	00123	00123	00123	00123	00123
P00165	.14	00124	00124	00124	00124	00124	00124	00124	00124	00124	00124	00124
P00167	.15	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125
P00171	.16	00126	00126	00126	00126	00126	00126	00126	00126	00126	00126	00126
P00173	.17	00126	00126	00126	00126	00126	00126	00126	00126	00126	00126	00126
P00175	.18	00127	00127	00127	00127	00127	00127	00127	00127	00127	00127	00127
P00177	.19	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131
P00201	.20	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131
P00135	.2	00113	00113	00113	00113	00113	00113	00113	00113	00113	00113	00113
P00203	.21	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131	00131
P00137	.3	00114	00114	00114	00114	00114	00114	00114	00114	00114	00114	00114
P00141	.4	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115
P00143	.5	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115
P00205	.50	00134	00134	00134	00134	00134	00134	00134	00134	00134	00134	00134
P00145	.6	00162	00162	00162	00162	00162	00162	00162	00162	00162	00162	00162

SATS

PLANTS

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ED

PAGE NO.

5

P00147 .7 00117
 P00151 .8 00120
 P00153 .9 00120
 P00210 .01 00112
 P00071 .07 00067
 P00133 .06 00070
 P00065 .09
 P00012 .0191 00213
 P00030 .0192 00226
 P00037 .0193 00234
 P00042 .0194 00252
 P00003 .0171 00077
 P00073 K 00103
 P00347 KK 00105
 P00003 L 00057
 C00000 CUDATA 00004
 P00320 PF00002. 00011
 P00324 PF00003. 00021
 X00003 PLANT 00205
 P00051 PLANTS 00051
 X00002 OBJECT. 00000
 X00006 UNSINGL. 00276
 X00005 STM. 00075
 X00001 TEND. 00101
 C00000 TIME 00216
 P00066 T500001. 00000
 P00243 T500002. 00246
 P00267 T500003. 00262
 P00063 W500001. 00005
 P00237 W500002. 00244
 P00263 W500003. 00270
 X00004 ZAGCNT 00273
 00121 SYM-SLS

00132

00260

00106 00214

00110

00264 00264

00052

00211 00224 00232 00250 00256

00221 00227 00245 00251 00271

00216

00244

00270

```

SUBROUTINE PRINDAT(IMDS)
  CSURR  PRINT  IFEB71 *****
  C      PRINTS INDAT AND INDATAP *****
  CUSE   EDATAX 2600070 *****
        COMMON/EDATA/CUTUATA(320),INDATA(320)
        TYPE INTEGER CUTUATA
        EDATAX *****
  CEND   COMMON/ESTOR/SCALE1,IMAX,NCRDS,NINDATA,NEXTEVNT,
        1 MERSM,INDATAP(320),CUTDATAP(320),SYDATAP(320),NEXTTIME,
        2 TAPE TIME(10),SVTIME(10),NTCUT(10)
        COMMON/TIME/TIME,FUTIME
        MTIME=TIME-24.
        PRINT 1,MTIME
        1 FORMAT(23H **INPUT DATA FOR TIME F10.4)
        2 PRINT 2,((INDATAP(I),I=1,NCRDS)
        3 FORMAT(8H INDATAP,12X,5(C16,X)/120X,5(C16,X)))
        PRINT 3,((INDATA(I),I=1,IMDS)
        4 FORMAT(7H INDATA ,13X,5(C16,X)/120X,5(C16,X)))
        END
1000
61000
2000
3000
1000
2000
3000
4000
5000
6000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000

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5.4TS PRINDAT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

PRINDAT

EDATA
ESTOR
TIME

EXTERNAL SYMBOLS

THEND.
UNDOICT.
STR.
QNSINIL.

IOENT

00167
00055
01200
1746
00002

PRINDAT

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EU

PAGE NO.

2

SATS PRINDAT

P0132	REGIM.	00146	00154	00160		
P0131	CHVPT1.	00070	00103	00121		
P0003	CHVPT.	00073	00111	00127		
P0001	UIC.	00057	00066	00072	00135	00136
P0147	ENDING.	00060	00127	00132	00075	00110
P0000	EXIT.	00152			00133	00134
P0003	FORMAT.					
P0123	FP00001.	00144	00145			
C0001	FUTIME					
P0163	GETPL.	00137	00157			
P0153	GETPU.	00142				
P0073	GG00000.	00064				
P0111	GG00001.	00073				
P0127	GG00002.	00111				
P0165	HITIME	00063	00070	00104	00116	00117
P0166	I	00100	00101			00122
C0050	INDATA	00120	00120			
C0007	INDATAP	00102	00102			
P0132	INITIAL.	00060				
P0003	INDS	00123				
P0003	..1	00067				
P0013	..2	00076				
P0003	..3	00114				
C0177	MEATIME					
C0006	MEM65W					
C0004	NOINDATA					
C0005	NEATEVT		00104			
C0003	NCRDS					
C0000	CUIDATA					
C0057	CUIDATAP					
P0146	PGJUG2.	00143				
P0055	PRINDAT	00055				
X0002	GR40DICT.	00000	00056			
X0004	ONSINGL.	00133				
C0000	SCALET					
C0001	SCALETI		00065	00112		
X0003	STM.					
C0120	SVUATAP					
C0122	SVTIME					
C0170	TAPETIME					
X0001	THEMD.	00071	00107	00125		
C0000	TIME	00061	00051			
C0002	TMX					
P0010	TS00001.	00100				
P0123	TS00002.	00116				
P0101	WS00001.	00106	00106			
P0117	WS00002.	00124	00124			
C0173	WT56C					

00040 SYMBCL5

FTNS.5

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PAGE NO.

1

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SHRROUTINE PRGOUTDAT(IUNPKC)
CSUBR  PRGOUTDAT 26AUG70 *****
C      PRINTS OUTDATA, OUTDATAP *****
CUSE   EDATAX 26AUG70 *****
COMMON/FOURDATA/OUTDATA(320),INDATA(320)
TYPE INTEGER OUTDATA
CEND   EDATAX *****
COMMON/ESTOR/SCALET,SCALETI,IMAXIN,CHDS,NOINDATA,NEXTIENVF,
1  NEROSP,INDATAP(320),OUTDATAP(320),SVOUTAP(320),NEXTLINE,
2  TAPETIME(10),SVTIME(10),TCGC(10)
COMMON/TIME/TIME,FUTIME
TIME=TIME-24.
FTIME=FUTIME-24.

PRINT 1,TIME,FTIME
1  FORMAT(1/32M ** OUTPUT DATA PLANTED AT TIME F1.4,23M FOR EXECUTION
1  AT TIME F1.4)
NN=NMCHDS+2
PRINT 2,(OUTDATAP(I),I=1,NN)
2  FORMAT(9H OUTDATAP,11X,5(C16,4X)/(20X,5(C16,4X)))
PRINT 3,(OUTDATA(I),I=1,IUNPKC)
3  FORMAT(9H OUTDATA,12X,5(C16,4X)/(20X,5(C16,4X)))
END

```

01/03/72

PNCUTDAY

IDENT

00206
00064

PNCUTDAY

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMESEDATA
ESTOR
TIME01200
01746
00002

EXTERNAL SYMBOLS

THEND.
ORODICT.
STH.
UNSHOUL.

5.4TS PROCUTDAY

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P00147 BEGIN.	00103	00171	00175	00136		
P00146 CNVRT.	00101	00102	00120			
P00003 CRFMT.	00105	00126	00144			
P00001 DICT.	00066	00077	00104	00112	00125	00153
P00194 ENDING.	00067	00144	00147	00150	00130	00143
P00000 EXIT.	00147			00151	00151	00151
P00003 FORMAT.						
P00143 FPLC.	00141	00162				
P00202 FTIME.	00074	00102				
P00001 FUFF.	00072	00073				
P00200 GEPL.	00154					
P00170 GETPO.	00157	00174				
P00105 GGU0000.	00075					
P00124 GGU0001.	00110					
P00144 GGU0002.	00126					
P00203 HTIME	00072	00101				
P00204	00114	00116	00121	00133	00134	00157
C00500 INDATA						
C00307 INUTAP	00067					
P00147 INITIAL.	00143					
P00003 LUNPK	00100					
P00003 .1	00113					
P00021 .2	00151					
P00043 .3						
C01707 MEMTIME						
C00006 MENSW						
C00004 NDIMDATA						
C00005 NEITEVNT						
P00205 NN	00107	00122				
C00003 NRCRUS	00105	00105				
C00000 GUIDATA	00135	00135				
C00507 GUIDATAP	00117	00117				
P00163 PF00002.	00163					
P00364 PROCUTDAY	00064					
X00000 OBWDICT.	00000	00065				
X00004 UNSINGL.	01145					
C00000 SCALET						
C00001 SCALETI	00076	00111	00127			
X00003 STM.						
C01207 SVUTAP						
C01722 SVTIME						
C01710 TAPE TIME	00104	00124	00142			
X00001 THEND.	00070	J0070				
C00000 TIME						
C00002 TMAX						
P00122 TSU0001.	00113					
P00140 TSU0002.	00133					
P00116 WSO0001.	00123	00123				
P00134 WSO0002.	00141	00141				
C01734 WTCG3						
00062 SYMBOLS						

```

SUMROUTINE RANDORDR(NTEST)
  CSUBR
  C  RANDORDR 26AUG70 *****
  C  RANDOMLY ORDERS A SET OF INDICES
  C  COMMON/INDEX/INDEX(30)
  C  DIMENSION VAL(30)
  C  FILL VAL WITH RANDOM NUMBERS
  C  DO 1 L=1,NTEST
  C    INDEX(L) = L
  C    1 VAL(L) = RAND(-1)
  C    IF ONE OR FEWER INDICES TO BE FILLED RETURN
  C    IF (NTEST-LE.1)*.10
  C    10 LI = NTEST - 1
  C    ORDER INDEX ACCORDING TO ASCENDING SEQUENCE OF RANDOM VALUES
  C    2 DO 8 L=1,LI
  C      IF (VAL(INDEX(L)).LE.VAL(INDEX(L+1))) 8,7
  C      7 ITEMP = INDEX(L)
  C      INDEX(L) = INDEX(L+1)
  C      INDEX(L+1) = ITEMP
  C    8 CONTINUE
  C    ONE LESS COMPARE ES REQUIRED ON EACH SUCCEEDING PASS
  C    LI = LI - 1
  C    IF (LI) 2,9
  C    9 RETURN
  C  END

```

1000
04000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
18000
19000
20000
21000
22000
23000

5.ATS RANCHORDER

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES
EXTERNAL SYMBOLS

RANCHORDER

INDEX

OSQOICT.
RANF

IDENT

U0167

U0041

U0036

RANCHORDER

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ED

0

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2

5.4TS RANORDER

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POL122	00142	00150	00154		
POL163	00051	00052	00074		
POL001	00043	00060	00125		
POL143	00044	00121	00122	00123	00124
POL000	00146				
POL047	00134	00135			
POL043	00137	00137			
POL066	00140	00141			
POL157	00127				
POL147	00132	00153	00076	00100	00107
COO000	00054	00054		00101	00111
	00113	00114			00112
POL122	INITIAL.				
POL144	ITEMP	00113			
POL055	.1				
POL060	.10				
POL071	.2				
POL107	.7				
POL115	.8	00106			
POL121	.9	00065			
POL162	EMASER.				
POL160	INSTIFF.				
POL165	.	00102	00103	00072	00074
POL166	LI	00052	00053		
POL041	NIEST	00072	00116		
POL142	PF00002.	00063	00066		
XU0001	QR001CT.	00042			
XU0002	RANF				
POL041	RANORDER				
POL063	TS00001.				
POL116	TS00002.				
POL003	VAL	00103	00104		
POL053	WS00001.				
POL076	WS00002.				
	00041 SYMCLS				

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```

SUBROUTINE HOCARUS
  MCARDS 2HAPK71 *****
  COMMON/ATTHIT/FA,FCMA,LI,CON,RPEN
  COMMON/ABNDATA/IANDEF(2),PSEL(2),PAK(2),PREM(2),PAK(2)
  CUSE
  DAMAGE 2HAPK71 *****
  COMMON/DAMAGE/WT2LMT,VULN(63)
  CEND
  DAMAGE *****
  COMMON/FUTPRINT/IFUT
  COMMON/INBMBF/INBMBF
  COMMON/INREP/INREP
  COMMON/PRINT/PRINT(60)
  TYPE LOGICAL IPMINT
  COMMON/IPS=ICH/IPS=1,IPS=2,IPS=3,IPS=4,IPS=5,IPS=6
  1,IPS=7
  COMMON/LATTHIT/UEFHI,UEFLC,BKRRP
  CUSE
  NAMES 2HAPK71 *****
  COMMON/NAMES/NAMESIDE(2),NAMCLS(15),NAMTYPE(250)
  CEND
  NAMES *****
  COMMON/NSW/NSW
  COMMON/HEAD/HMCUMNET,DELAY(2)
  CUSE
  IR=DATA 2HAPK71 *****
  COMMON/THDATA/PTK(2),NTINT(500)
  CEND
  IR=DATA *****
  COMMON/VULNDATA/PG(12),PA(12),UG(18),UA(8)
  COMMON/ZONES/AMEA(63),ZDEFPCT(63),ZCCPCT(63),NPENZ(63),KILLZ(63),
  IMAZONE(2)
  PRINT 11..
  110 FORMAT(1H THE FOLLOWING DATA WAS READ FROM CARUS--1)
  C
  READ STARTING MANUCH NUMBER, SET RANDUM NUMBER GENERATOR
  READ 104,R
  PRINT 117,R
  117 FORMAT(5X,3HR =,F11.0)
  CALL RANDSET(R)
  C
  READ NUMBER OF EVENT TAPES
  READ 107,NET
  PRINT 118,NET
  118 FORMAT(5X,SHNET =,I2)
  124 FORMAT(10L1)
  PRINT 131,IPRINT
  131 FORMAT(6H PRINT,4X,1H=,5(9X,1H=),/1X,BOL1)
  C
  READ VALUE FOR OPTION OF PRINTING INDATA BLOCKS HEAD FROM TAPE
  C
  IPS=1 -MISSILE INDATA PRINTS, IPS=2 -BOMBER, IPS=3 -TANKER
  C
  MSLS- IPS=4-INTAN,TOF, IPS=5-XYZ+DEC, BOMBENS- IPS=6-XYZ+WT
  C
  NAVDRL - IPS=7
  READ 107,IPSW1,IPSW2,IPSW3,IPSW4,IPSW5,IPSW6
  1,IPS=7
  PRINT 119,IPSW1,IPSW2,IPSW3,IPSW4,IPSW5,IPSW6
  1,IPS=7
  119 FORMAT(5X,6HIPS=,7I2)
  C
  READ VALUE FOR FUTURE PRINT OPTION
  READ 107,IFUT
  PRINT 120,IFUT
  120 FORMAT(5X,6HIFUT =,I2)
  C
  READ VALUE FOR OPTION OF PRINTING INDATA BLOCKS AT EXECUTION TIME
  READ 1 17, NSW

```

```

111 PRINT 111,NSW
    FORMAT(5X,5HNSW =,I2)
    IF (NSW.EQ.0) 999,999
C   IF CALLED, OPTPRIN WILL READ NSW MONPRIN EXECUTION TIME DATA CARDS
999 CALL OPTPRIN
999 CONTINUE
    READ 107, INBC4HF
    PRINT 121, INBC4HF
121 FORMAT(5X, 9HINBC4HF =, I2)
    READ 107, INREP
    PRINT 122, INREP
122 FORMAT(5X,THINREP =,I2)
C   READ AREA ATTRITION PARAMETERS
    READ 100,FK,FCN,ALT,CCN,HPEN
100 FORMAT(5F10.0)
    PRINT 101,FK,FCN,ALT,CCN,HPEN
101 FORMAT(5X,4HF =,F6.2,6X,5HFCM =,F6.2,5X,5HALT =,F6.2,6X,
    15HCCN =,F6.2,6X,5HHPEN =,F6.2)
C   READ MAX. NO. OF ZONES ON EACH SIDE
    READ 125,MAXZONE
125 FORMAT(2I10)
    PRINT 126,MAXZONE
126 FORMAT(16H MAX BLUE ZONE =,I3,16H MAX RED ZONE =,I3)
C   READ LOCAL ATTRITION PARAMETERS
    READ 102, DEFH, DEFLG, HKBRP
102 FORMAT(3F10.0)
    PRINT 103,DEFH,DEFLG,HKBRP
103 FORMAT(5X,7HDEFH =,F6.2,6X,7HDEFLG =,F6.2,6X,7HKBRRP =,F6.2)
C   READ VULNERABILITY DATA FOR VLRAU
    READ 123, (PG(I),I=1,12)
    READ 123, (PA(I), I=1,12)
    READ 123, (QG(I),I=1,8)
    READ 123, (QA(I),I=1,8)
123 FORMAT (8F10.5)
C   READ MAXIMUM EFFECTIVE RADIUS OF ONE-NEGATON WARHEAD
    READ 104, WTR21M
104 FORMAT(F10.0)
    PRINT 108, WTR21M
108 FORMAT(5X,9HWTR21M =,F6.1)
107 FORMAT(16I10)
C   READ BLUE AND RED DELAY TIMES
    READ 109,DELAY
109 FORMAT(2F10.0)
    PRINT 105,DELAY
C   ADD A 24 HR BIAS TO THE DELAY TIMES TO ASSURE POS. FJTIMES
    DELAY(1)=DELAY(1)+24.0
    DELAY(2)=DELAY(2)+24.0
105 FORMAT(5X,12HBLUE DELAY =,F6.3,2X,5HRS.,5X,11HRED DELAY =,F6.3,
    12X,4HRS.)
C   READ BLUE AND RED TERMINAL BMD PARAMETERS
    READ 109,PTK
    PRINT 106,PTK
106 FORMAT(5X, 18HBLUE TERMINAL PK =,F5.3,7X, 17HRED TERMINAL PK =,
    1 F5.3)
    PRINT 115
115 FORMAT(4X,5H SIDE,7X,7H LARDEF,5X,5H PSEL,5X,5H PAK,

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FTNS.5

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C      1 SX,SH PREM,5X,5H PAKD)
      2 HEAD BLUE AND RED AREA AND PARAMETERS
      3 DC 15 1=1,2
      4 READ I13,IARDEF(I),PSEL(I),PAK(I),PREM(I),PAKU(I)
      5 113 FORMAT(I10,I0X,4F10.0)
      6 15 PRINT I14,NAME SIDE(I),IARDEF(I),PSEL(I),PAK(I),PREM(I),PAKU(I)
      7 114 FORMAT(5X,A4,4X,I10,4F10.0)
      8 C      READ H-HOUR (TIME OF DAY) IN DEC. HRS. INTO COMMON
      9      READ I14,HHOUR
     10      PRINT I30,HHOUR
     11 130 FORMAT(5X,8HH-HOUR =,F6.3)
     12 PRINT I12
     13 112 FORMAT(28H END OF DATA READ FROM CARDS/)
     14 END

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106000
107000
108000
109000
110000
111000
112000
113000
114000
115000
116000
117000
118000
119000

5.4TS HUCARDS

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HUCARDS
AATTHIT
ABM DATA
DAMAGE
FUTPRINT
INBCHBF
INREP
IPRINT
IPSWICH
LATTHIT
NAMES
NSW
READ
TBM DATA
VULN DATA
ZONES

IUENT

01175
00341
00005
00012
00100
00001
00001
00001
00002
00007
00003
00413
00001
00004
00766
00050
00475

HUCARDS

EXTERNAL SYMBOLS

THEND.
GBOODICT.
RANFSET
OPTPRIN
TSH.
STM.
SLQ.
SLI.
SLI.
UNSLINGL.

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U

SATS

MDCARDS

5

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0

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0

0

0

0

CU0002 ALT
 CU0003 AREA
 PU0170 REGIN.
 CU0002 AKRP
 PU0167 CNVRTL.

 CU0003 CON
 PU0003 CRFMI.

 CU0003 DEFM
 CU0001 DEFLC
 CU0002 DELAY
 PU0001 ULCT.

 PU0171 ENRFS.
 PU0000 EXIT.
 CU0001 FCR
 CU0000 FR
 PU0003 FCMMAT.
 PU0353 GGG0000.
 PU0363 GGG0001.
 PU0373 GGG0002.
 PU0406 GGG0003.
 PU0416 GGG0004.
 PU0430 GGG0005.
 PU0442 GGG0006.
 PU0461 GGG0007.
 PU0477 GGG0010.
 PU0507 GGG0011.
 PU0517 GGG0012.
 PU0527 GGG0013.
 PU0537 GGG0014.
 PU0554 GGG0015.
 PU0564 GGG0016.
 PU0574 GGG0017.
 PU0604 GGG0020.
 PU0621 GGG0021.
 PU0635 GGG0022.
 PU0647 GGG0023.
 PU0661 GGG0024.
 PU0674 GGG0025.
 PU0706 GGG0026.
 00614 00630
 01170
 00671 00703
 00357 00370
 00466 00467
 00350 00561
 00630 00631
 00746 00763
 01127 01130
 00615 00631
 00353 00373
 00635 00647
 01170 01076
 00666 00666
 00670 00702
 01121 01033
 00343 00347
 00415 00420
 00501 00506
 00556 00563
 00643 00646
 00725 00737
 01120 01023
 01122 01075
 01164 01165
 00344 00344
 01171 01171
 00613 00627
 00611 00611
 00345
 00353
 00363
 00376
 00406
 00416
 00430
 00442
 00461
 00477
 00507
 00517
 00527
 00537
 00554
 00564
 00574
 00604
 00621
 00635
 00647
 00661
 00674
 00706
 00402 00413
 00470 00471
 00570 00601
 00632 00665
 00776 01007
 01131 01132
 00416 00430
 00661 00674
 01116 01137
 00700 00700
 01036 01036
 00352 00355
 00424 00427
 00511 00516
 00566 00573
 00651 00655
 00737 00754
 01026 01032
 01102 01115
 00625 00625
 00446 00446
 00472 00472
 00610 00610
 00667 00667
 01104 01104
 01143 01143
 00442 00442
 00706 00706
 01157 01157
 00450 00450
 00473 00473
 00612 00612
 00670 00670
 01107 01107
 01154 01154
 00477 00477
 00702 00702
 01165 01165
 01040 01040
 00365 00365
 00436 00436
 00526 00526
 00603 00603
 00663 00663
 00771 00771
 01046 01046
 01134 01134
 00451 00451
 00474 00474
 00613 00613
 00701 00701
 01110 01110
 00452 00452
 00503 00503
 00614 00614
 00702 00702
 01111 01111
 00453 00453
 00514 00514
 00615 00615
 00703 00703
 01112 01112
 00454 00454
 00523 00523
 00626 00626
 00714 00714
 01124 01124
 00455 00455
 00534 00534
 00627 00627
 00731 00731
 01126 01126
 00621 00621
 01044 01044
 00405 00405
 00463 00463
 00546 00546
 00634 00634
 00710 00710
 01011 01011
 01014 01014
 01064 01064
 01067 01067
 01156 01156
 00410 00410
 00476 00476
 00553 00553
 00637 00637
 00722 00722
 01014 01014
 01067 01067
 01161 01161

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P00723	GG00027.	00706					
P00740	GG00031.	00723					
P00755	GG00031.	00740					
P00772	GG00032.	00755					
P01002	GG00033.	00772					
P01012	GG00034.	01002					
P01024	GG00035.	01012					
P01036	GG00036.	01024					
P01056	GG00037.	01036					
P01070	GG00040.	01056					
P01076	GG00041.	01070					
P01116	GG00042.	01100					
P01135	GG00043.	01116					
P01147	GG00044.	01137					
P01157	GG00045.	01147					
P01165	GG00046.	01157					
C00000	HH0000	01164	01144	00715	00732	00745	00751
P01173	I	00713	00717	01122	00732	00751	00756
		00766	01106	01125	00732	00751	00756
C00000	IANDER	01106	00504	00513	00732	00751	00756
C00000	IPUT	00504	00551	00560	00732	00751	00756
C00000	INCHHF	00551	00571	00600	00732	00751	00756
P01170	INITIAL.	00571	00637	00665	00732	00751	00756
C00000	INDEF	00637	00647	00665	00732	00751	00756
C00000	IPRINT	00647	00651	00677	00732	00751	00756
C00000	IPR41	00651	00677	00677	00732	00751	00756
C00001	IPS42	00677	00677	00677	00732	00751	00756
C00002	IPS43	00677	00677	00677	00732	00751	00756
C00003	IPS44	00677	00677	00677	00732	00751	00756
C00004	IPS45	00677	00677	00677	00732	00751	00756
C00005	IPS46	00677	00677	00677	00732	00751	00756
C00006	IPS47	00677	00677	00677	00732	00751	00756
P01116	IP5	00677	00677	00677	00732	00751	00756
P00544	999	00677	00677	00677	00732	00751	00756
P00542	999	00677	00677	00677	00732	00751	00756
P00111	1110	00677	00677	00677	00732	00751	00756
P00114	1111	00677	00677	00677	00732	00751	00756
P00157	1102	00677	00677	00677	00732	00751	00756
P00162	1103	00677	00677	00677	00732	00751	00756
P00203	1104	00677	00677	00677	00732	00751	00756
P00223	1105	00677	00677	00677	00732	00751	00756
P00245	1106	00677	00677	00677	00732	00751	00756
P00215	1107	00677	00677	00677	00732	00751	00756
P00206	1108	00677	00677	00677	00732	00751	00756
P00220	1109	00677	00677	00677	00732	00751	00756
P00003	1110	00677	00677	00677	00732	00751	00756
P00066	1111	00677	00677	00677	00732	00751	00756
P00331	1112	00677	00677	00677	00732	00751	00756
P00307	1113	00677	00677	00677	00732	00751	00756
P00314	1114	00677	00677	00677	00732	00751	00756
P00263	1115	00677	00677	00677	00732	00751	00756
P00014	1116	00677	00677	00677	00732	00751	00756
P00022	1116	00677	00677	00677	00732	00751	00756
P00052	1119	00677	00677	00677	00732	00751	00756

5.4TS HUCARUS

CUU077 ZUEFROT
00216 SYMBOLS

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CSURR      SUNKOUTLINE RE-JOIN
C          HEADIN 1NAUG71 *****
C          HEADS IN DATA FROM LIBRARY DATA TAPE
C          COMMON/HEADAT/4INT(20*3),NLHM(20),IOVERLAP(20),KRAO
CUSE        ASYS 28APR71 *****
C          COMMON/ASMS/PLAHCNT(20),CEPA(20)
CEND        ASYS *****
CUSE        HONRER 28APR71 *****
C          COMMON/HONRER/PLABT(80),IMDEL(80),ADHATE(80),PRABT(80),CEPB(80),
C          I TLINTH(80),IFUNCH(80)
CEND        HONRER *****
CUSE        HRPNT 28APR71 *****
C          COMMON/HRPNT/TYPECUM(15),NBLUE(TYP(15),INDEXCL(15),INDEXGT(250)
CEND        HRPNT *****
C          COMMON/CAPACITY/DEFPCT(40),CCPCT(40)
CUSE        DAMAGE 28APR71 *****
C          COMMON/DAMAGE/TRZINT,VULN(63)
CEND        DAMAGE *****
CUSE        FILABEL 28APR71 *****
C          COMMON/FILABEL/INIDENT,INRUNNG,INDATE,
C          INPCHM,INSECN,INTIME,INLNGTH,INCUMH(5)
CEND        FILABEL *****
C          DATA(JHATE = 8HGV70 )
CUSE        MISSLE 28APR71 *****
C          COMMON/MISSLE/PINC(80),PARCRT(80),PDSES(80),PEPF(80),IPCHCK(80),
C          THET(80),IH(80),CEPH(80),PKMIS(80),TLINTH(80),IFUNCH(80)
CEND        MISSLE *****
CUSE        NAMES 28APR71 *****
C          COMMON/NAMES/NAMESIUE(2),NAMCLS(15),NAMETYPE(250)
CEND        NAMES *****
C          COMMON/NAVDATA/PK(10,10),TK(10,10)
C          COMMON/NCCL/NCCL,MAXIND
C          COMMON/PAYLOAD/HIRV(40*2),INTYP(40*2),NBCHB(40*2),NTUEC(40*2),
C          I MADEC(40*2)
CUSE        TANKER 28APR71 *****
C          COMMON/TANKER/PLABT(40),TTMDEL(40),
C          TANKATE(40),TLINT(40),IFUNCH(40)
CEND        TANKER *****
CUSE        TRMDATA 28APR71 *****
C          COMMON/TRMDATA/PIK(2),NTINT(500)
CEND        TRMDATA *****
C          COMMON/TWCRD/TWCRD,ITCRD
C          EQUIVALENCE(TWCRD,ITCRD)
CUSE        WAMHEAD 28APR71 *****
C          COMMON/WAMHEAD/YIELD(50),PDUD(50),CEPW(50)
CEND        WAMHEAD *****
C          COMMON/ZONES/AREA(63),ZUEFPCT(63),ZCFPCT(63),NPENZ(63),KILLZ(63),
C          I MRLZONE(2)
C          UTREMSION BOM(80*7),MIS(80*11),TANK(40*5)
C          EQUIVALENCE(BOM,PLABT),(MIS,PINC),(TANK,PLABT)
CUSE        NRCELL 22JUN71 *****
C          COMMON/19501/NRCELL,LINKM(7000),STATUS(12000),COLAR(4000)
CEND        NRCELL *****
C          PUT TAPE IN READ STATUS
C          CALL SETHEAD

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C      CHECK SIMTAPE FORMAT
      IF (INFOFM.EQ.0) DATE=1.2
      PRINT 90014,INFOFM,DATE
90014  FORMAT(//,1M, SIMTAPE FORMAT IS,48,10M SHOULD BE,48)
      STOP
C      HEAD R=AKPOINT TABLE DATA
      1 CALL RWCHND
      NTYPE=ITWCHD
      PRINT 9001,NTYPE
90001  FORMAT(2X,9MNTYPE=,15)
      CALL RWARRAY(INDHEGY,NTYPE)
      CALL RWARRAY(INMETYPE,NTYPE)
      CALL RWARRAY(INTYPECOM,15)
      CALL RWARRAY(INLUEPY,15)
      CALL RWARRAY(INDREGCL,15)
      CALL RWARRAY(NAMCL5,15)
      HEAD HARDSNESS TABLE DATA
      CALL RWCHND
      NVUL=ITWCHD
      PRINT 9002,NVULN
90002  FORMAT(2X,9MNVULN,15)
      CALL RWARRAY(VULN,NVULN)
      C      HEAD COLLOCATED TARGETS DATA
      CALL RWCHND
      NCOL=ITWCHD
      PRINT 9003,NCOL
90003  FORMAT(2X,9MNCOL,15)
      C      CHECK THAT NO. OF COLLOCATED TARGETS USES NOT EXCEED ARRAY SIZE
      IF (NCOL.GT.4000) 99.5
      5 CALL RWARRAY(COLLAH,NCOL)
      C      HEAD NO. OF TERMINAL DEFENDERS AT EACH COMPLEX
      CALL RWCHND
      NDEF = ITWCHD
      CALL RWARRAY(NTINT,NTDEF)
      C      READ AREA ARM DEFENSE DATA
      CALL RWCHND
      CALL RWARRAY(AINI,60)
      CALL RWCHND
      CALL RWARRAY(NLRM,20)
      CALL RWCHND
      CALL RWARRAY(TOVCHLAP,20)
      C      HEAD STATUS DATA
      CALL RWCHND
      MAXIND=ITWCHD
90013  FORMAT(2X,9HMAXIND,15)
      PRINT 90013,MAXIND
      C      CALL RWARRAY(SIMTUS,MAXIND)
      READ MISSILE DATA
      CALL RWCHND
      NDIS=ITWCHD
      PRINT 9004,NDIS
90004  FORMAT(2X,9HNDIS,15)
      C      NO. IN 1M = 1.11
      CALL RWARRAY(MIS(1:1M),NMIS)
      C      CONTINUE
      READ HOSHER DATA

```

```

CALL RWCHRD
NCHN=ITACHD
PRINT 40005,NCHN
90005 FORMAT(2X,9NNHCH) *15)
NC 20 IT = 1.7
CALL RWARRAY(ICHN(1,18),NCHN)
2) CONTINUE
C HEAD TANKER DATA
CALL RWCHRD
NTARK=ITWCHD
PRINT 40006,NTARK
90006 FORMAT(2X,9NNHNTARK) *15)
NC 30 IT = 1.5
CALL RWARRAY(TANK(1,11),NTARK)
30 CONTINUE
C HEAD ASM DATA
CALL RWCHRD
NASH=ITACHD
PRINT 40007,NASH
90007 FORMAT(2X,9NNHNSH) *15)
CALL RWARRAY(PLASHT,NASH)
CALL RWARRAY(CEPA,NASH)
C HEAD WARHEAD DATA
CALL RWCHRD
NWH=ITACHD
PRINT 40008,NWH
90008 FORMAT(2X,9NNHWH) *15)
CALL RWARRAY(DDU,NWH)
CALL RWARRAY(ICLU,NWH)
CALL RWARRAY(CEP,NWH)
C HEAD ZONE DATA
CALL RWCHRD
NZON=ITACHD
PRINT 40009,NZON
90009 FORMAT(2X,9NNHZN) *15)
CALL RWARRAY(AR,NZON)
CALL RWARRAY(CCPOT,NZON)
CALL RWARRAY(DEFECT,NZON)
C HEAD DEFENSIVE COMMAND/CONTROL EFFECTIVENESS DATA
CALL RWCHRD
NTYCC=ITWCHD
PRINT 40010,NTYCC
90010 FORMAT(2X,9NNHNTYCC) *15)
CALL RWARRAY(CCPOT,NTYCC)
C HEAD INTERCEPTION EFFECTIVENESS DATA
CALL RWCHRD
NTYPI=ITWCHD
PRINT 40011,NTYPI
90011 FORMAT(2X,9NNHNTYPI) *15)
CALL RWARRAY(DEFECT,NTYPI)
C HEAD PAYLOAD DATA
NC 40 IT=2
CALL RWCHRD
NPAYL=ITACHD
PRINT 40012,NPAYL
90012 FORMAT(2X,9NNHPAYL) *15)

```

31/03/72

PAGE NO.

4

CALL RUARRAY(MINV (1.1),NPAYLOAD)
 CALL RUARRAY(ITYP(1.1),NPAYLOAD)
 CALL RUARRAY(MCHMS(1.1),NPAYLOAD)
 CALL RUARRAY(NTUEC(1.1),NPAYLOAD)
 CALL RUARRAY(NADEC(1.1),NPAYLOAD)

40 CONTINUE

CALL RDWCRD

NCHMS=ITWCRD

CALL RUARRAY(PK,NCHMS)

CALL RUARRAY(TK,NCHMS)

CALL TERTAPE

HFTOMV

C TCC MANY COLOCATED TARGETS--PRINT MESSAGE AND ABORT

99 PRINT 101,NCOL

101 FORMAT(7H NCOL =,10,22H EXCEEDS LIMIT OF 9999)

CALL ABORT

END

139000
 140000
 141000
 142000
 143000
 144000
 145000
 146000
 147000
 148000
 149000
 150000
 151000
 152000
 153000
 154000
 155000

5.415 HEADIN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

IDENT

IDENT

IDENT

HEADIN

AHEADAT

ASMS

HOMER

HKKPAT

CAPACITY

DAMAGE

FILABEL

MISSLE

NAMES

NAVDATA

NCOL

PAYLOAD

TANKER

THMATA

TWOTH

WARHEAD

ZONES

19501

EXTERNAL SYMBOL

THEND

URGSTOP

ORODICI

SETHEAD

RDWCHU

RDWCHY

TERMTAPE

ABORT

STH

UNSIROL

SATS	HEADLINE	01/03/72	EO	PAGE NO.	9
000011	STR.	00272	00405	00401	00526
000120	TAKE-TE	00611			
000200	TAKE				
000307	TAKE-TE	00450			
000400	TAKE-TE	00423			
000500	TAKE-TE	00574			
000600	TAKE-TE				
000700	TAKE-TE				
000800	TAKE-TE				
000900	TAKE-TE				
001000	TAKE-TE				
001100	TAKE-TE				
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002100	TAKE-TE				
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009700	TAKE-TE				
009800	TAKE-TE				
009900	TAKE-TE				
010000	TAKE-TE				

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5.4TS

PAGE NO.

EU

01/03/72

2

HECHER

IDENT

00136
00003
J1200
03101
00000
00001
00024
04731

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HECHER

EDATA
HECOV
MISREC
MICROSCUT
KEYWORDS
195-1

EXTERNAL SYMBOLS
9400101.
IGET
-115T

5-4TS HECHEK

01/03/12

EU

PAGE NO.

3

C00472 H						
P00122 HEGIN.	00123					
C45071 COLAN						
C00505 DGA						
C00005 DGC						
C00506 DGY						
C00006 DGTG						
C00507 DHC8						
C00007 DHCRC						
P00001 DICT.	00005	00033	00041	00050	00062	
P00124 ENDING.	00006	00053	00055	00065		
P00000 EXIT.	00124					
C00526 EXTRA						
A00003 HIST	00040	00047	00061			
C00513 IALERT						
C00013 IALERTG						
C00517 IALT						
C00017 IALTC						
C00001 IHA5E						
C00511 ICLASS						
C00011 ICLASSC						
C00001 IDEPEN	00024	00025	00114	00114		
X00002 IGET	00032					
C00524 INT						
C00024 IMIC						
P00133 ILIVE	00036					
P00066 IN0001.	00027	00100	00110	00120		
C00501 INBASE						
C00500 INDATA						
C00772 INUE	00007	00007	00044	00044		
C00272 INUES						
C00002 INDM	00012	00012	00023	00024	00036	00050
C00652 INDP						
C00152 INUPC						
C00502 INUV						
P00123 INITIAL.	00000					
C00503 INIAR						
C00514 INZNF						
C00014 INZNG						
P00134 IM	00015	00022	00074			
C00000 IMC	00031	00031	00034	00057	00057	
C00000 IMECV	00030	00030				
C00412 IMES						
C00012 IMESC						
P00135 IS	00020	00104				
C00510 ITYPE						
C00010 ITYPC						
C01112 I11P						
C00412 I11YPC						
P00007 .1						
P00012 .2	00010					
P00032 .3	00060					
P00040 .4						
P00047 .41	00045					


```

SUMROUTINE RECOVERY
CUSEH: RECOVERY ZHAPN71 *****
C      TESTS IF A HORNER IS RECOVERED AFTER COMPLETING ITS MISSION
CUSE  DATAH *JAN71 *****
COMMON/EDATA/SLUES,INASE,INDH,INTAK,NMTPC,DGAG,DUGY,DHCHC,ITYPC,
1  ICLASSO,IMEGG,IALENIC,INCON,NDHIC,NOLCG,IALIS,NCMC,PKNAV,SPG(2),
2  IATC,JMTC,XT(2),MALIS,TABCHC,TINCO(180),INDPS(80),INDECT(60),
3  IWTPO(12),XNDZ(12),YDZ(12),ZDZ(12),B(6),CUTDATA(320),SIDE,
4  INBASE,INVA,IALAM,NMTPC,DGAG,DUGY,DHCHC,ITYPC,ICLASS,IMEG,IALENI,
5  INZCH,NDHIC,NOLCG,IALIS,NCMC,PKNAV,SPG(2),IMJ,EXTHA(2),VALI,
6  IATCHC,TINC(80),INDP(60),IND(180),IMTP(12),XNDZ(12),YDZ(12),
7  ZDZ(12),INDATA(320)
8  EQUIVALENCE (SLUES,CUTDATA(1)), (SIDE,INDATA(1))
9  EQUIVALENCE (NPLAM,NALI), (MH1,IMI), (MH1,JMI)
10 TYPE INTEGER DGAG,DUGY,DHCHC,XNDZ,YDZ,ZDZ
11 TYPE INTEGER DUGAG,DUGY,DHCHC,XDZGZ,YDZGZ,ZDZGZ
12 TYPE INTEGER CUTDATA,SLUES
13 *****
14 CEND  DATAH *****
15 *****
16 COMMON/KEYWORDS/KEYARRAY(20)
17 EQUIVALENCE (KEYARRAY(1),ISTAT)
18 COMMON/TIME/TIME,FUTIME
19 *****
20 CUSE  RECOV ZHAPN71 *****
21 COMMON/RECOV/IRECOV(50,4,2),ICFREC(50,4,2),NMCHC(50,4,2),
22 NMES(50,4,2),LSHIFT
23 *****
24 CEND  RECOV *****
25 *****
26 DATA(LSHIFT=100H)
27 COMMON/HISREC/IREC,IDEPEN,LAXONE
28 COMMON/HISTOUT/NHISTOUT(200)
29 EQUIVALENCE (NHISTOUT(20),NDEPEN)
30 EQUIVALENCE (NHISTOUT(7),NEVENT)
31 *****
32 CUSE  *CELL 22JUN71 *****
33 *CELL 19501/NHCELL,LINKM(7000),STATUS(12000),CLAN(4000)
34 *CELL *****
35 *****
36 CALL HIST(16,1)
37 IS = SIRE
38 TEST IF RECOVERY AT NOME BASE
39 1 IF (INDE .EQ. 10) 12,2
40 UNPACK IDEPEN,IM
41 2 IR=INDP/LSHIFT
42 TEST IF LIVE BASE AVAILABLE ON DEPENETRATION
43 IF (IR .GE. 1) 4,3
44 3 CALL HIST(16,4)
45 RETURN
46 IDEPEN=INDP-IR*LSHIFT
47 IREC = IRECOV(IDEPEN,IR-15)
48 NDEPEN=IREC
49 TEST IF RECOVERY BASE KILLED AFTER DEPENETRATION
50 ILIVE=IGET(ISTAT,IREC,STATUS)
51 IF (ILIVE) 6,11
52 6 NMCHC(IDEPEN,IR,15) = NMCHC(IDEPEN,IM,15) - 1
53 INDEG=0
54 TEST IF RECOVERY BASE SATURATED
55 7 IF (NMCHC(IDEPEN,IR,15) .GE. 0) 9,8
56 BASE SATURATED
57 8 CALL HIST(16,5)
58 *****
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998 *****
999 *****
1000 *****

```

FTNS.5

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2

```

C      GC TO 10
      BASE UNSATURATED
      9 CALL HIST(10,2)
      C      PLANT CHECK EVENT TO SEE IF BOMBER KILLED AFTER RECOVERY
      10 INDC=INDP
      1-10=1
      J=1000
      FULTIME=TIME*50.
      CALL PLANTS(19,12)
      RETURN
      C      RECOVERY BASE DEAD ON ARRIVAL
      11 CALL HIST(10,3)
      RETURN
      C      RECOVERY AT HOME BASE
      12 ILIVE=100*(1-STAT*INDP*STATUS)
      NEVENT=10
      NDEPERED
      INDC=INDP
      IF(ILIVE) 13,14
      13 CALL HIST(10,6)
      INDC=19
      GC TO 10
      C      HOME BASE DEAD
      14 CALL HIST(10,7)
      END

```

35000
37000
38000
39000
40000
41000
42000
43000
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45000
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49000
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52000
53000
54000
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56000
57000
58000
59000
60000

5.6TS RECOVERY

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

RECOVERY
EDATA
KEYWCHUS
TIME
RECOV
HISREC
HISTOUT
19501

EXTERNAL SYMBOLS

QDDICT.
-HIST
IGET
PLANTS

IDENT

JU22b
00003
J1200
JU024
00002
J3101
00003
00310
54731

RECOVERY

EU

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3

5.4TS RECEIVED

000134	0013	00132
000142	0014	00133
00021	0017	00134
00030	0027	00135
00033	0026	00136
00035	0027	00137
00035	0027	00138
00042	0027	00139
00046	0027	00140
00047	0027	00141
00053	0027	00142
00054	0027	00143
00054	0027	00144
00054	0027	00145
00054	0027	00146
00054	0027	00147
00054	0027	00148
00054	0027	00149
00054	0027	00150
00054	0027	00151
00054	0027	00152
00054	0027	00153
00054	0027	00154
00054	0027	00155
00054	0027	00156
00054	0027	00157
00054	0027	00158
00054	0027	00159
00054	0027	00160
00054	0027	00161
00054	0027	00162
00054	0027	00163
00054	0027	00164
00054	0027	00165
00054	0027	00166
00054	0027	00167
00054	0027	00168
00054	0027	00169
00054	0027	00170
00054	0027	00171
00054	0027	00172
00054	0027	00173
00054	0027	00174
00054	0027	00175
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00054	0027	00181
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00054	0027	00190
00054	0027	00191
00054	0027	00192
00054	0027	00193
00054	0027	00194
00054	0027	00195
00054	0027	00196
00054	0027	00197
00054	0027	00198
00054	0027	00199
00054	0027	00200

000000

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```

SUBROUTINE REFUEL
  CSMHR  REFUEL  ZMPPR71 *****
  C      TESTS FOR SUCCESSFUL ROMBER REFUELING *****
  CUSE   ROMBER  ZMPPR71 *****
  COMMON/ROMBER/PLANT(80),IMDEL(80),ARMATE(80),PRABT(80),CEPR(80),
  1  TLINTH(80),IFUNC(80)
  CEND   ROMBER *****
  CUSE   EDATAH  *JAN71 *****
  COMMON/EDATAH/SIDE,IBASE,INDM,JNLAN,NWTP,DXGZ,UNYC,DMCHD,ITYC,
  1  ICLASS,IREG,IALTC,INZON,NOLC,NULC,IALTC,NMCS,PRNAV,SPST2,
  2  IJWTC,XX(2),NALTC,TABCHTS,TINC(80),INDPC(80),INJCT(80),
  3  IMTPC(12),XDGZ(12),YDGZ(12),ZDGZ(12),B(5),OUTDATA(32),SIDE,
  4  INHASP,INDV,INTAN,NWTP,DXGZ,UNYC,DMCHD,ITYC,ICLASS,IREG,IALTC,
  5  INZON,NOLC,IALTC,NMCS,PRNAV,SPANE(2),INT,JCT,EXTMA(2),NALTC,
  6  TABCHT,TINC(80),INDPC(80),INDE(80),IMTYP(12),XDGZ(12),YDGZ(12),
  7  ZDGZ(12),INDATA(32)
  EQUIVALENCE (SIDE,OUTDATA(1)), (SIDE,INDATA(1))
  EQUIVALENCE (INPLAN,NALTC), (IMT,IMT), (IMT,JCT)
  TYPE INTEGER DXGZ,UNYC,DMCHD,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER DXGZ,UNYC,DMCHD,XDGZ,YDGZ,ZDGZ
  TYPE INTEGER OUTDATA,SIDE,SIDEQ
  CEND   EDATAH *****
  CUSE   HISTREF  15MAR71 *****
  COMMON/HISTREF/NFGC,INEED *****
  CEND   HISTREF *****
  COMMON/REFUEL/NFTANK(100),NETANK(100)
  COMMON/TIME/TIME,FUTIME
  COMMON/HISTOUT/HISTOUT(200)
  EQUIVALENCE (NFGC,NHISTOUT(9))
  DATA(IMSHP = 1000), (IMSHP = 100)
  C      UNPACK ROMBER EVENT DATA
  1  CONTINUE
  C      RECORD CALL TO REFUEL
  CALL HIST(4,3)
  C      ELIMINATE ALTERNATE WEAPONS UNTIL NEEDED
  JNTS=VEJNT
  JNT = "
  C      GET THE CURRENT PLACE AND TEST IF IT IS A REFUELING AREA
  INDR = INDR(1),AND, 777R
  INTR = INDR(1)/IRSHY
  IF (10TH-101,101,102)
  101  NT = 1
  102  NT = 1
  GO TO 103
  103  NT = INTR,AND,7H
  NT = INTR/IRSHY
  INTR = (6*NT)/NNT
  IF (INDRA,EQ,0) 3,2
  C      TEST FOR FULL TANKS IN AREA
  2  IF (NETANK(INDRA),LT,INEED) 1,3
  C      TEST FOR REFUELING ABORT
  3  IF (PRABT(ITYC),GT, RANF(-1)) 1,4
  C      TEST IF CURRENT PLACE IS A REFUELING AREA
  4  IF (INDRA,EQ,0) 7,5
  C      INCREASE NO. OF EMPTY TANKERS, DECREASE NO. OF FULL TANKERS
  5  NETANK(INDRA) = NETANK(INDRA) + INTR

```

```

6  NETANK(INHHA) = NETANK(INHHA) - INEEU
C  MFCOMD SUCCESSFUL REFUELING
7  CALL HIST(*,1)
C  CHECK TO SEE IF THIS IS THE FIRST OF TWO REFUELINGS
  IF(INDE(INT-1) .EQ. 4) 15*75
75  INT=INT-NALT
C  DISCARD ALTERNATE EVENTS IN HISTORY TABLE
  DO 4 I=1,INT
    TIME(I) = TIME(I) + NALT
    INDE(I) = INDE(I) + NALT
    INDE(I) = INDE(I) + NALT
  IF(INDE(I) .EQ. 4) 34* INDE(I) = EQ.14)8)1-8
  4) INT = INT + 1
  4 CONTINUE
C  DISCARD ALTERNATE WEAPONS
  JALIE = J-TSAVE-JAT
  DO 9 J=1,JAT
    INTYP(J) = INTYP(J) + JALT
    XINGZ(J) = XINGZ(J) + JALT
    YINGZ(J) = YINGZ(J) + JALT
    ZINGZ(J) = ZINGZ(J) + JALT
  9 GO TO 15
C  MFCOMD NO TANKERS AVAILABLE
10  CALL HIST(*,4)
  GO TO 12
C  MFCOMD REFUELING ABORT
11  CALL HIST(*,2)
C  SEE IF FAILURE ON FIRST OF TWO REFUELINGS
12  IF(INDE(INT-1) .EQ. 4) 10-12)
C  RESET HISTORY TABLE COUNTER TO CONSIDER THE ALTERNATE EVENTS
13  INT = INT + 1
  DO 14 I = 1, NALT
    IF(INDE(I) .EQ. 4) 34* INDE(I) = EQ.14)13)14
  14 CONTINUE
  14 NALT =
  IF(INDE(INT-1) .EQ. 10) 17)13)
  RETURN
C  SUCCESSFUL FIRST OF TWO REFUELINGS
152  MFCODE=28
  JAT=JAT+SAVE
  GO TO 15)
C  RETURN TO LAUNCH BASE
16  CALL HIST(*,5)
C  PLAN RECOVERY AT HOME BASE
  INDE=INDE
  INDE=INDE+1
  INT=INT+1
  INT =
  JAT =
  CALL PLANS(16)28)
  RETURN
C  ALTERNATE MISSION RETURN HOME
17  CALL HIST(*,6)
  GO TO 15)

```

FTNS.5

E-11

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PAGE NO.

3

82000

628

5.4TS REFUEL

PROGRAM LEVIM
CITY POINTS
BLOCK NAMES

REFUEL
ACMHEM
EDATA
HISTREF
REFUEL
TIME
MISTOUT

EXTERNAL SYMBOLS
MUNICI.
MIST
NEXTENT
PLAYIS
RANF

IDENT

REFUEL

00322
00005
01060
01200
00002
00310
00002
00310

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20

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SATS REFUEL

01/03/12

EU

1

PAGE NO.

6

CO-412 1x1YPC

CO-411 11

CO-410 10

CO-409 09

CO-408 08

CO-407 07

CO-406 06

CO-405 05

CO-404 04

CO-403 03

CO-402 02

CO-401 01

CO-400 00

CO-399 99

CO-398 98

CO-397 97

CO-396 96

CO-395 95

CO-394 94

CO-393 93

CO-392 92

CO-391 91

CO-390 90

CO-389 89

CO-388 88

CO-387 87

CO-386 86

CO-385 85

CO-384 84

CO-383 83

CO-382 82

CO-381 81

CO-380 80

CO-379 79

CO-378 78

CO-377 77

CO-376 76

CO-375 75

CO-374 74

CO-373 73

CO-372 72

CO-371 71

CO-370 70

CO-369 69

CO-368 68

CO-367 67

CO-366 66

CO-365 65

CO-364 64

CO-363 63

CO-362 62

CO-361 61

CO-360 60

CO-359 59

CO-358 58

CO-357 57

CO-356 56

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SATS

REFUEL

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20

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7

C00530 NPLAW
 P00321 RT
 C00504 NATYP
 C00004 NATYPC
 C00000 CUFFOTA
 C00521 PRWAY
 C00021 PRWAYC
 C00000 PLWHT
 C00300 PLWHTS
 C00300 PRWHT
 C00001 PRWHTCT.
 X00000 HAWF
 X00000 REFUEL
 P00005 REFUEL
 C00500 SLOE
 C00001 SLOEC
 C00522 SPARE
 C00022 SPC
 C00531 TACOMT
 C00031 TACOMTC
 C00000 T14E
 C00530 T14C
 C00032 T14C
 C00620 T14C
 C00120 T14C
 P00145 T14C
 P00202 T14C
 P00234 T14C
 P00115 T14C
 P00155 T14C
 P00225 T14C
 C01126 T14C
 C00426 T14C
 C00026 T14C
 C01142 T14C
 C00442 T14C
 C01156 T14C
 C00456 T14C
 00214 SATS

00031 00035 00041

00263
 00001
 00000
 00000
 00000

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00254 00255
 00121 00121 00122 00256

00112
 00132
 00222
 00144
 00201
 00233
 00104
 00165 00165

00171 00171 00172
 00170 00174 00177

Sa-15

WFLM

31/03/12

EU

PAGE NO.

2

REQUIRE LF WITH
ENTRY POINTS
MILCA 12005

00035
00003

12001
LISTEN
ESTOR

34731
00001
21744

LOCAT METL4

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DATA AND SYMBOLS
J-001001

FTMS.5

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FUNCTION INDEX (X)
CSUM
SUM=J.0
DO I=1,12
1 SUM=SUM+RANK(I-1)
WRITE(UNIT=6.0
RETURN
END

1001
03001
0000
0000
0000
0000
0000
0000

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S-4TS

INDEX

ADJUST
ENTRY POINTS
DATE-TIME SYMBOLS
SUBJECT
NAME

INDEX

INDEX

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[illegible]

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FTN5.5

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2

55 IF (J1 - EQ, JTMX, CH, TIME, 160, 170, 60)
C IF NOT PLANT AUGMENT FOR EXECUTION IN ONE-QUARTER HOUR
60 FUTURE = TIME + .25
CALL PLANTS(6, J)
70 NCRUCIT = 1
RETURN
END

59.00
59.00
59.00
59.00
59.00
59.00
59.00

5.4.7S SSTAT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

SSTAT

TPKINT

NAMES

WCRUCUT

TIME

ZONES

ZSTATUS

HISTCUT

EXTERNAL SYMBOLS

01010100

THEND.

03000040

UNODICT.

HISTORIT

PLANTS

STM.

UNSIGNL.

IDENT

SSTAT

00316

00076

00002

00413

00001

00002

00475

00001

00310

[illegible]

5.4TS

SSTAT

01/03/72

EU

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5

X00003	U3000000	00247			
X00004	U0000000	00271	00077		
X00010	U0000000	00271			
X00076	SSTAT	00076			
X00007	STH.	00151	00206		
X00002	THE NO.	00150	00220		
C00000	TIME	00134	00134		
P00132	TS00002.	00123		00137	00142
P00223	TS00003.	00104		00255	00255
P00105	WS00001.	00246			
P00126	WS00002.	00131			
P00105	WS00001.	00224			
C00001	X				
C00003	Y				
C00176	Z00000	00200	00200		
C00077	Z00000	00175	00176		
	00104 SY402LS				

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1

```

SUBROUTINE STATUS4
  STATUSM 2HAPRT1 *****
  PRINTS A SUMMARY OF STATUSES OF GAME ITEMS BY CLASS AND TYPE *****
  CUSE BRKPT 2HAPRT1 *****
  COMMON/BRKPT/NTYPECUM(15),NBLUETYP(15),INDBEGCL(15),INDBEGTY(250) *****
  CEND BRKPT *****
  COMMON/KEYWORDS/KEYARRAY*201 *****
  EQUIVALENCE(KEYARRAY(1),TSTAT),(KEYARRAY(17),IKEEP) *****
  NAMES 2HAPRT1 *****
  COMMON/NAMES/NAMESIDE(2),NAMCLS(15),NAMETYP(250) *****
  CEND NAMES *****
  NRCCL 22JUN71 *****
  COMMON/19501/NRCCL,LINKM(7000),STATUS(12000),COLAR(*000) *****
  CEND NRCCL *****
  DIMENSION NSURV(250),NINIT(250),IK(250) *****
  TYPE LOGICAL IK *****
  EQUIVALENCE(NSURV,LINKM),NINIT,LINKM(251)) *****
  C EJECT A PAGE AND INITIALIZE FOR LOOP THROUGH ALL TYPES
  CALL PAGESKP
  1 NTYPES = NTYPECUM(15)
  DO 10 I=1,NTYPES
    NSURV(I)=0
    IK(I)=0
  C GET FIRST AND LAST INDEX FOR THE CURRENT TYPE
    IREG=INDBEGTY(I)
    IEND=INDBEGTY(I+1)-1
  C ALL WERE ALIVE INITIALLY
    NINIT(I)=IEND-IREG+1
  C SEE IF TYPE IS DYNAMIC
    IDYN = IGFT(IKEEP,IREG,STATUS)
  7 IF(IDYN)10,10+8
  * IK(I) = 1
  C COMPUTE NUMBER OF SURVIVORS BY TESTING STATUS ITEM IN STATUS ARRAY
  DO 9 J = IREG,IEND
    NSURV(I) = NSURV(I) + IGFT(STATUS,J,STATUS)
  9 CONTINUE
  10 CONTINUE
  NTR0
  C PRINT CLASS NAME AND SIDE NAME--UC FOR ALL TYPES
  DO 21 K = 1,15
    PRINT 101,NAMCLS(K)
  101 FCHMAT(5X,6HCLASS,AB,10X,7HINITIAL,7X,7HINITIAL,8X,6HNUMBER,8X,
    1 6HNUMBER,7X,7HPERCENT/31X,5HINDEX,8X,6HNUMBER,8X,
    2 9HSURVIVING,5X,6HKILLED,8X,6HKILLED)
  11 DO 20 L=1,2
    PRINT 102,NAMESIDE(L)
  102 FCHMAT(10X,6HSIDE ,*4)
  C TEST FOR CURRENT SIDE BLUE (1) OR RED (2)
    IF(L.EQ.2)14,12
  C SIDE IS BLUE - SET LOOP LIMITS FROM 1 THRU BLUE ITEMS OF THIS TYPE
  12 IREG=NT+1
    IFND=NT+NBLUETYP(K)
    DO 13 I=I
  C SIDE IS RED - SET LIMITS FROM BLUE END THRU LAST ITEM OF THIS TYPE
    14 IREG=IEND+1

```

01/03/72

```

IFND = NT -NTYPECUM(K)
16 DO 19 I = IREG, IEND
  IFUK(I) 17, 18
17 NKILL = NINIT(I) - NSURV(I)
  PKILL = (100.0 * NKILL) / NINIT(I)
  C      PRINT TYPE NAME, INITIAL NUMBER, NUMBER SURVIVING, NO. KILLED.
  C
  C      PERCENT KILLED
  PRINT 103, 1, NAME TYPE(I), INDEBTY(I), NINIT(I), NSURV(I), NKILL, PKILL
103 FORMAT(12X, 16.2X, A8, 4(16.8X), F6.2)
  GO TO 19
18 PRINT 104, 1, NAME TYPE(I), INDEBTY(I), NINIT(I)
104 FORMAT(12X, 16.2X, A8, 16.8X, 16)
19 CONTINUE
20 CONTINUE
21 CALL P.GESKP
  END

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50000
52000
52100
53000
54000
55000
56000
57000
57100
59000
61000
61100
61200
62000
62100
62300
63000

SATS STATUS

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

STATSUM
HRRPNT
KEYWORDS
NAMES
19501

EXTERNAL SYMBOLS

03010040
THEND.
03000140
01004100
01005100
ORGNICT.
PAGE SKP
IGET
STM.
0051 40L.

IDENT

00360
00115
00447
00024
00413
04731

STATSUM

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EU

1

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3

SATS	STATUS	01/03/72	EU	U	PAGE NO.	
P00336	REGIN.	00337				
P00335	CHARTL.	00207				
		00315				
C45171	COLAR					
P00344	COUNT.	00160				
P00013	CRFAT.	00212				
P00001	DICT.	00117				
		00321				
P00340	ENDING.	00120				
P00000	EXIT.	00333				
P00013	FORMAT.	00341				
P00212	W000000.	00201				
P00225	W000001.	00214				
P00303	W000002.	00202				
P00322	W000003.	00304				
P00145	I	00125				
		00130				
P00346	IREG	00145				
P00347	IDYN	00147				
P00350	IENG	00140				
X00010	IGET	00143				
P00003	IK	00133				
C00020	IKEEP	00145				
C00036	INDREGCL					
C00055	INDREGTY	00134				
P00336	INITIAL.	00140				
P00174	IV	00151				
P00123	.1					
P00212	.11					
P00230	.12					
P00236	.14					
P00243	.16					
P00251	.17					
P00304	.18					
P00322	.19					
P00325	.20					
P00327	.21					
P00150	.7					
P00152	.8					
P00172	.9					
P00342	ERASER.	00170				
P00013	.101	00166				
P00062	.102	00204				
P00071	.103	00217				
P00104	.104	00265				
P00351	J	00307				
P00352	K	00156				
C00000	KEYARAY	00205				
P00353	L	00220				
C00001	LINKM	00213				
C00002	NAMECLS	00206				
C00000	NAMESIDE	00221				
C00001	NAMEITYPE	00267				
C00000	NRCCELL	00267				
		00172				
		00232				
		00240				
		00225				
		00325				
		00312				
		00313				
		00174				
		00157				
		00242				
		00236				
		00247				
		00136				
		00134				
		00271				
		00271				
		00271				
		00245				
		00237				
		00231				
		00323				
		00251				
		00266				
		00310				
		00312				
		00277				
		00275				
		00277				
		00300				
		00311				
		00313				
		00264				
		00302				
		00306				

[illegible]

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C      NPEN = NAL = NDET = 0
C      SSIDE IS ATTACKING SIDE, CSSIDE IS DEFENDING SIDE
C      CSSIDE = 3-SIDE
C      GET COMPLEX FOR THIS TARGET, TEST IF IT IS DEFENDED
      IF (TAIM.EQ. 0) 36.1
C      1 IT=IGET(IITEM,INTAR,STATUS)
C      2 IF (IT.EQ. 0) 50.3
C      3 IF (NTINT(IT) = 0) 50.4
C      4 CONTINUE
C      ASSIGN ENOUGH INTERCEPTORS FOR .99 KILL PROBABILITY
      IF (PTK(CSIDE).GE. 0.99) 5.6
C      5 N=1
      GO TO 9
C      6 N=(5/LOGF(1.-PTK(CSIDE)))*.0.7
C      INTERCEPTORS ALLOCATED=INTERCEPTORS/POINTING. TERMINAL AIM POINTS
C      7 NAL = NOTAIM
C      TEST IF ENOUGH INTERCEPTORS ARE AVAILABLE
C      10 IF (NAL.GT. NTINT(IT)) 13.11
C      COMPUTE KILL PROBABILITY
C      11 PK = 1.-((1.-PTK(CSIDE))**.0.0)
C      12 GO TO 17
C      ONLY ONE INTERCEPTION PER OBJECT
C      13 N = 1
C      NUMBER ALLOCATED=1.0.0. OF TERMINAL AIM POINTS
C      14 NAL = TAIM
C      RETRIEVE KILL PROBABILITY
C      15 PK = PTK(CSIDE)
C      TEST IF ENOUGH INTERCEPTORS ARE AVAILABLE
C      16 IF (NAL.GT. NTINT(IT)) 13.11
C      AVAILABLE--DECREASE INTERCEPTOR SUPPLY
C      17 NTINT(IT) = NTINT(IT)-NAL
C      CHECK EACH WARHEAD TO SEE IF IT GETS THROUGH
C      18 DO 21 I=1,NMHDS
C      19 IF (PA.WE.WANK (-1)) 21.20
C      WARHEAD LEAKS THROUGH
C      20 NPEN = NPEN+1
C      21 CONTINUE
C      TEST FOR ANY WARHEAD LEAKAGE
C      23 IF (NPEN.EQ. 0) 32.24
C      COMPUTE MEAN POINT OF IMPACT
C      24 SIG = CEPH(TTYPE)*.02*.73H
C      MAGX = WNDDEV(0) * SIG
C      MAGY = WNDDEV(0) * SIG
C      25 SIG = CEPH(TTYPE)*.02*.473H
C      TEST EACH PENETRATING WARHEAD FOR DESIGNATION
C      27 DO 31 I = 1,NPEN
      IF (PJUD(INWTP).GE. WANK (-1)) 31.28
C      28 NPEN = NPEN - 1
C      31 CONTINUE
C      32 CALL HIST(4.2)
C      COMPUTE ACTUAL (UNKNOWN) ZERO COMPONENTS
      GO TO 1.1. NDET
      JAGX = WNDDEV(0)*SIG
      JAGY = WNDDEV(0)*SIG

```

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C      COMPUTE DESIRED GROUND ZERO COMPONENTS
29 JAGX = D6X + MAGX + JAGX
   JAGY = D6Y + MAGY + JAGY
C      CALL FOR BURST DAMAGE ASSESSMENT
30 CALL ADAMAGE
35 CONTINUE
36 CONTINUE
   RETURN
C      NOT ENOUGH INTERCEPTIONS FOR N = 1
38 NAL = NTINT(IT)
39 NTINT(IT) = 1
C      COMPUTE NUMBER OF OBJECTS NOT ATTACKED
40 NREM = TATM-NAL
   N1 = NNHDS*1
   DC 41 I = 1+NNHDS
41 ICAT(I) = 1
   DC 42 I = N1+TA[M
42 ICAT(I) = 0
C      CALL REORDER TO RANDOMLY RECHUE ICAT
   CALLRANORDER(TA[M)
C      DETERMINE IF EACH UNATTACKED OBJECT IS A WARHEAD
   DC 44 I = 1+NREM
   IF(ICAT(INDEX(I)).EQ.0)44,43
43 NPEN = NPEN+1
44 CONTINUE
C      COMPUTE NUMBER OF WARHEADS REMAINING
   NNHDS = NNHDS-NPEN
   GO TO 18
C      NO INTERCEPTORS
50 NPEN = NNHDS
   GO TO 23
   END

```

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79000
80000
81000
82000
83000
84000
85000
86000
87000
88000
89000
90000
91000
92000
93000
94000
95000
96000
97000
98000
99000
100000
101000
102000
103000
104000
105000
106000
107000
108000
109000
110000

```

SATS TERMMD

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

TERMMD

EDATA
HISTARM
INDEX
GROUND
KEYWORDS
MISSLE
TBM DATA
WARHEAD
19501

IDENT

00425
00042
01200
00006
00036
00002
00024
01560
00766
00226
54731

TERMMD

EXTERNAL SYMBOLS

Q1Q1Q100
Q2Q07110
Q8B01CT.
HIST
IGET
RNDV
RDAMAGE
RANGHUR
RANF
LOGF

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ED

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4

5.415 TERMEND

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5

C00516	AA1W						
C00016	AA1W						
X00007	MDAMAGE						
P00373	REGIN.						
C01002	CEPA	00204					
C00144	CEPY	00224					
C45.71	COLAR						
P00411	COURT.						
C00505	U04	00165	00233	00235	00325	00336	00352
C00005	U04	00271					
C00505	U04	00274					
C00006	U04						
C00006	U04						
C00507	U04						
P00001	U04						
P00375	END100.						
P00000	EXIT.						
C00502	FALIST						
X00004	MIST						
P00412	I						
C00000	IAGY						
C00001	IAGY						
C00513	IAGY						
C00013	IAGY						
C00013	IAGY						
C00014	IAGY						
C00000	IAGY						
C00013	IAGY						
C00001	IAGY						
P00003	ICAT						
C00511	ICLASS						
C00011	ICLASS						
C01440	IFUNCH						
X00005	IGET						
C00501	INDASE						
C00500	INDATA						
C00000	INDATA						
C00002	INDATA						
C00502	INDATA						
P00373	INITIAL.						
C00506	INITIAL.						
C00006	INITIAL.						
C00503	INITIAL.						
C00504	INITIAL.						
C00740	INITIAL.						
C00512	INITIAL.						
C00012	INITIAL.						
P00413	IT						
C00015	ITER4						
C00510	ITYPE						
C00010	ITYPE						
P00062	.I						
P00121	.II						
P00126	.II						

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P00140 .12
P00141 .13
P00143 .14
P00145 .15
P00150 .16
P00155 .17
P00161 .18
P00166 .19
P00067 .2
P00174 .20
P00177 .21
P00200 .23
P00203 .24
P00207 .25
P00223 .26
P00227 .27
P00245 .28
P00271 .29
P00072 .3
P00300 .30
P00247 .31
P00250 .32
P00302 .35
P00305 .36
P00306 .38
P00311 .39
P00076 .4
P00314 .40
P00327 .41
P00340 .42
P00360 .43
P00362 .44
P00132 .5
P00367 .50
P00104 .8
P00116 .9
P00400 .ERASER.
P00377 .NSTIFF.
P00414 JAGX
P00415 JAGY
C00003 JNTAR
C00000 KEYARRAY
C00440 LAUNLIST
C00001 LINKM
X00012 LCRF
P00416 MAGX
P00417 MAGY
C00514 MDATA
C00014 MDTAG
C00040 MLAUNLIST
C00562 MLIST
C00062 MLISTG
C00016 MWPNLIST
P00420 N

00125
00140 00153 00153
00365
00173 00174
00371
00201
00244
00070
00243 00244
00202
00101
00154
00075
00357
00357
00101
00071 00074 00075
00101
00103
00107 00112 00113 00131 00134 00167 00237
00355 00355
00262 00273
00270 00276
00110
00214 00272
00222 00276
00103 00115 00116 00135 00142

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P00421 N1	00321	00332	00335	00121	00144	00150	00157	00157
C00001 NAL	00054	00120	00315	00315				
C00004 NAREA	00053	00245	00245	00303	00303			
C00003 NBCELL	00054	00175	00175	00176	00200	00360	00360	00361
C00003 NDET	00364	00364	00370	00370				
C00507 NMIRV	00310	00347						
C00002 NPEN								
P00422 NREM	00047	00047						
C00515 NTARG	00073	00073	00123	00152	00156	00160	00160	00307
C00015 NTARGC	00307	00312	00313	00317	00322	00363	00363	00365
C00005 NTERA	00046	00046	00162					
C00002 NTINT	00365	00367	00367					
C00514 NMD5								
C00014 NMD5C								
C00002 NMD5X								
C00514 NMD5S								
C00014 NMD5C								
C00504 NMTYP	00243	00223	00233	00234				
C00004 NMTYPC	00057	00076	00105	00127	00145			
P00372 CSIDE								
C00000 GUIDATA								
C00120 PAMCHT								
C00240 PDES	00242	00243						
C00062 PDU								
C00360 PFPF								
C00000 PINC								
P00423 PK	00137	00147	00172					
C01200 PKMIS								
C00000 PTK	00377	00377	00105	00127	00146	00146	00146	
X00001 Q1410100	00114	00213	00221	00267				
X00002 Q247110	00132							
X00003 Q80110	00000	00043						
X00011 RANF	00170	00244						
X00010 RANCMUER	00343							
X00006 RANDEV	00207	00215	00255					
P00041 S	00112							
C00500 S10E	00355	00056						
C00000 S10EG								
P00424 SIG	00206	00212	00220	00260	00266			
C15531 STATUS	00065							
C00515 TAIM	00057	00060	00117	00143	00143	00333	00334	00345
C00015 TAIMC								
P00042 TERM40	00042							
C01320 TLINTM								
C00532 TCF								
C00032 TCFC								
C00500 TPCMER								
C00620 TRET								
P00200 TS00001-	00164							
P00250 TS00002-	00232							

S&TS TERMID40

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P00303 TSU0003. 00254
P00332 TSU0004. 00324
P00343 TSU0005. 00335
P00363 TSU0006. 00350
C00516 MPNLIST
P00166 MSU0001. 00.77
P00236 MSU0002. 002.7
P00255 MSU0003. 00304
P00327 MSU0004. 00331
P00340 MSU0005. 00342
P00353 MSU0006. 00362
C00000 YIELD
U0251 SYMCLS

U0304

01/03/72

```

SUBROUTINE TRYLAUNCH
  TRYLAUNCH 28APR71 *****
  TESTS FOR SUCCESSFUL MISSILE LAUNCH *****
  CUSE      26AUG70 *****
  COMMON/EDATA/SILOE,INBASE,INDM,INIM,INIFYP,DOAG,DOYC,DHCHC,
  1         ITPC,ICLASS,INBSC,IALERTC,INPNSC,NTARSC,
  1         MNPCLIST(18),LAUNCHLIST(18),MLIST(27),CUTDATA(32),
  1         SILE,INBASE,INDM,INIFYP,DOAG,DOYC,DHCHC,
  1         ITPC,ICLASS,IREP,IALERT,INPNS,NTAR,
  1         MNPCLIST(18),LAUNCHLIST(18),MLIST(27),CUTDATA(32)
  TYPE INTEGER CUTDATA,SILE,CSILE,AAIM,TAIM,PLIST
  TYPE INTEGER DOAG,DOYC,DHCHC,DOAG,DOYC,DHCHC
  TYPE INTEGER TAIM,AAIM
  EQUIVALENCE (SILE,CUTDATA(1)),(SILE,INDATA(1))
  EQUIVALENCE (IPAYLOAD,INDATA(5)),(INIM,INDATA(8))
  EQUIVALENCE (INITVULC,CUTDATA(7)),(INITVULN,INDATA(7))
  EQUIVALENCE (ITPC,CUTDATA(27)),(ITP,INDATA(27))
  DIMENSION VDATA(14),MDATAG(14),TSC(14),TSCQ(14)
  EQUIVALENCE (MDATAG,CUTDATA(13)),(MDATA,INDATA(13))
  EQUIVALENCE (INIMOS,INDATA(13)),(TAIM,INDATA(14))
  EQUIVALENCE (AAIM,INDATA(15))
  EQUIVALENCE (TAIMC,CUTDATA(14)),(AAIMC,CUTDATA(15))
  EQUIVALENCE (INIMOSC,CUTDATA(13))
  DIMENSION PLIST(270)
  EQUIVALENCE (MLIST,PLIST)
  CEND      EDATAN *****

  COMMON/KEY/CROS/KEYARMAY(20)
  EQUIVALENCE (KEYARMAY(1),ISTAT)
  COMMON/TRYL/INDEA,MN(18),PINCMM,P-CABORI,PUEST,PLTFAIL,IPF,
  1 THEIANG,IREP,NCYCLE,NCOM,NALIVE,NMART,NSUCCESS,LATER,NTEST
  CUSE      22JUN71 *****
  COMMON/195/1/NBCELL,LINKM(700),STATUS(1200),CCLAR(400)
  CEND      NBCELL *****

  C INCREMENT NO. OF MISSILES PROCESSED
  1 NCYCLE=NCYCLE+1
  C GET MISSILE INDEX AND SILO INDEX
  2 INDEA = MNPCLIST(NCYCLE)
  C INBASE=LAUNCHLIST(NCYCLE)
  C INITIALIZE IN-COMMISSION FLAG
  IC=0
  C TEST IF MISSILE IS IN COMMISSION
  3 IF(PINCMM .LT. MAXP(-1)) 31*
  C RECORD MISSILE NOT IN COMMISSION. TURN OFF IN-COMMISSION FLAG
  31 CALL MIST(1,8)
  IC=1
  C GO TO 5
  C INCREMENT NUMBER OF MISSILES IN COMMISSION
  4 NCOM=NCOM+1
  C GET STATUS OF SILO AND TEST IF IT IS ALIVE
  5 ISTAT=IGET(ISTAT,INBASE,STATUS)
  IF (ISTAT .NE. 0) 5*51
  C SILO DEAD
  51 IF(1C.EQ. 1)53,52
  C RECORD THAT SILO IS DEAD AND THAT MISSILE WAS IN COMMISSION
  52 CALL MIST(1,9)

```

1.00
33.00
40.00
30.00
10.00
2.00
30.00
9.00
50.00
6.00
7.00
7.00
10.00
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12.00
13.00
14.00
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17.00
18.00
19.00
20.00
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70.00
80.00
90.00
1.00
50.00
100.00
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31.00
32.00

FTNS-5

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PAGE NO. 2

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C 53 GO TO 17
    RECORD THAT SILO IS DEAD AND THAT MISSILE WAS NOT IN COMMISSION
    CALL HIST(1,14)
    GO TO 17
C 54 IF (IC.EQ. 0) 17
    INCREMENT NUMBER OF MISSILES ALIVE
    NALIVE=NALIVE+1
C 6 TEST FOR LAUNCH ABORT
    IF (PGABORT.LT. HANF(-1)) 71,IC
C 7 LAUNCH ABORT
    CALL HIST(1,10)
C 71 TEST FOR DESTRUCTIVE ABORT
    IF (QUEST.GE. HANF(-1)) 81,17
C 8 SILO DESTROYED
    CALL HIST(1,11)
C 81 SET SILO STATUS TO DEAD
    CALL IPUT(ISTAT,INBASE,0,STATUS)
C 9 GO TO 17
    INCREMENT NUMBER NOT ABORTED
C 10 NNABT=NNABT+1
C 11 TEST FOR FAILURE IN POWERED FLIGHT
    IF (PLIFAIL.GE. HANF(-1)) 12,16
C 12 FAILED IN POWERED FLIGHT
    CALL HIST(1,12)
C 13 TEST FOR REPROGRAMMING FOR POWERED FLIGHT FAILURE
    IF (IHEP.GE. 5) 17
    IF AVAILABLE, INCREMENT NUMBER OF MISSILES TO TRY LATER
    NLATER=NLATER+1
    GO TO 17
C 14 INCREMENT NUMBER SUCCESSFULLY LAUNCHED
    NSUCC=NSUCC+1
C 15 RECORD SUCCESSFUL LAUNCH
    CALL HIST(1,13)
C 16 STORE WEAPON INDEX NUMBER
    INDEX=PIN(SUCC)
C 17 TEST FOR REPROGRAMMING CAPABILITY
    GO TO (171,172,173,174,175),IHEP
C 171 NTES=NCYCLE
    TARGETS FOR REPROGRAMMING = NO. MISSILES PROCESSED
    GO TO 99
C 172 NTES=NCOM
    TARGETS FOR REPROGRAMMING = NO. MISSILES IN COMMISSION
    GO TO 99
C 173 NTES=NALIVE
    TARGETS FOR REPROGRAMMING = NO. MISSILES ALIVE
    GO TO 99
C 174 NTES=NNABT
    TARGETS FOR REPROGRAMMING = NO. MISSILES NOT ABORTED
    99 RETURN
    END

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34000
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82000

5.4TS TRYLAUN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

TRYLAUN

EDATA
KEYWORDS
TRYL
1950

EXTERNAL SYMBOLS

Q0001CT.

-LIST

IGET

IPUT

RANF

IDENT

00202

00003

J1200

00024

00041

54731

TRYLAUN

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ED

J

PAGE NO.

3

662

5.4TS TAYLAUN

5

PAGE NO.

J

ED

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P00016	3						
P00025	31						
P00032	4						
P00034	5						
P00043	51						
P00046	52						
P00052	53						
P00056	54						
P00063	6						
P00062	7						
P00071	71						
P00074	8						
P00103	81						
P00115	9						
P00162	99						
P00165	ERASEM.						
C00002	JNFAH						
C00000	KEYARHAY						
C00540	LAUHLIST						
C00001	LIKYM						
C00514	MDATA						
C00014	MDATAC						
C00040	MLAULIS						
C00562	MLIST						
C00062	MLISTC						
C00016	MPRLIST						
C00033	NALIVE						
C00000	NRCELL						
C00032	NCOM						
C00031	NRICLE						
C00037	NDES						
C00036	NLATER						
C00507	NMLRV						
C00014	NNHRT						
C00035	PSUCC						
C00515	NTARG						
C00015	NTARGC						
C00040	NTST						
C00514	NHROS						
C00014	NHROS						
C00514	NHPS						
C00014	NHPS						
C00504	NHPS						
C00004	NHPS						
C00000	CUFNATA						
C00024	PELST						
C00025	PELFAIL						
C00022	PINCMM						
C00023	PHCARORT						
X00001	UBDICT.						
X00005	HAUF						
C00500	SIVE						
C00000	SIUEC						
C15531	STATUS						

5.4TS

TRYLAUN

CO0515 TAIM
CO0015 TAIMC
CO0532 TCF
CO0032 TCF3
CO0526 TPF
CO0027 TNETARG
PU0003 TRYLAUN
CO0000 TSTAT
CO0516 #PNLIST
00144 SYMCLS

00003
00036
00012
00110
00012

31/03/72

2J

0

PAGE NO.

6

```

SUBROUTINE UNPFCM
  CSUBM  UNPFCM 10JUN71 *****
  C      UNPACK FORMAT INDEX ARRAY *****
  COMMON/EVENT/INDEX,INUF *****
  COMMON/EPACK/INDFORMG(100) *****
  COMMON/PLANTS/INDFOR(80) *****
  DATA(I4SM6=100) *****
  1 IF(INDF.EQ.INDFC)0+2
  2 NC = 1
  3 J = 10*(INDF-1) + 1
  4 IUP = INDFOR(J)
  5 DC * K = 1+7
  6 INDFORMG(NC + 8-K) = IWD.AND.778
  7 IWD=IWD/IRSM6
  8 CONTINUE
  9 INDFORMG(NC) = IWD.AND.778
  10 NC=NC+8
  11 IF(INDFORMG(1) - NC + 2) 7+66
  12 J = J + 1
  13 GO TO 3
  14 INDFC = INDF
  15 RETURN
  16 END

```

1100
6000
2000
2100
3000
4000
5000
5100
6000
6100
6200
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
17500
18000

5.ATS UNPFCR 01/03/72 ED J PAGE NO. 2

IDENT UNPFCR

PROGRAM LENGTH UNPFCR
ENTRY POINTS UNPFCR
BLOCK NAMES
EVENT
EPACK
PLANTS
EXTERNAL SYMBOLS
08001CT.

00073
00004
00002
00144
00120

5.4TS UNPFCR

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EU

J

PAGE NO.

3

PU0060 BEGIN.
 PU0001 DICT.
 PU0062 ENDING.
 PU0000 EXIT.
 CU0000 INDEV
 CU0001 INUF
 PU0066 INDFC
 CU0000 INDFCR
 CU0000 INDFCRMC
 PU0060 INITIAL.
 PU0003 IRSK6
 PU0067 IAD
 PU0010 .1
 PU0013 .2
 PU0021 .3
 PU0037 .4
 PU0046 .5
 PU0052 .6
 PU0055 .7
 PU0057 .8
 PU0065 .EMASER.
 PU0064 .NSTIFF.
 PU0070 J
 PU0071 K
 PU0072 NC
 XU0001 Q8ADICT.
 PU0004 UNPFCR
 PU0026 W5U001.
 00034 SYMCLS

00057 00060

00010 00014 00015 00055 00055

00056 00022

00033 00042 00043 00046 00046

00031 00034 00036 00040

00051

00050

00012

00016

00030

00020

00024

00014

00000

00004

00040

00052 00053
 00037
 00042 00045 00047

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SUBROUTINE UNSJUEZ
  CSUBR  UNSJUEZ  IJUN71
  C      TRANSFER ARRAY IOUTUP TO LIST MEMORY
  C      NWORDS = NUMBER OF WORDS TO TRANSFER TO LIST MEMORY
  COMMON/ESTOP/SCALET,SCALET1,IMAXN*WORDS,NDIMD,NEATEV*MERUS*,
  1  IOUTAP(32),IOUTUP(32),ISVAT(32),MEMTIM,TAPEI(1),SVTIME(10),
  2  JIGG(10)
  COMMON/LISTME/LAVAIL
  CUSE  IACELL  22JUN71
  C      COMMON/19501/INCELL,LINKM(700),STATUS(1200),CLAR(4000)
  CEND  INCELL *****
  J = 1
  NCT = 0
  IS* = 1
  NWORDS = NWORDS
  IF (NWORDS) 7, 7, 1
  1 IF(NWORDS=NCT) 16,0,2
  2 I=I+1
  LINKM(I+1)=IOUTUP(J)
  LINKM(I+2)=IOUTUP(J+1)
  LINKM(I+3)=IOUTUP(J+2)
  LINKM(I+4)=IOUTUP(J+3)
  J=J+4  $ NCT=NCT+4
  LAVAIL=LINKM(I)
  IF(LAVAIL=0) 3,1
  NCT= NCT+1
  IF( NCT=1200) 3,1
  3 CONTINUE
  NCT= NCT+1
  4 IS* = 1
  CALL EVSPILL
  LINKM(I)=I+1
  5 TO 1
  5 CALL ENROL (20)
  RETURN
  C  WHERE TERMINATE LIST
  6 LINKM(I)=0
  7 RETURN
  END

```

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5.4TS UNSQUEEZ

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

UNSQUEEZ

ESTOR
LISTMEN
19501

EXTERNAL SYMBOLS

UNMODICT.
FVSPILL
FMRGL

IJENT

00101
00003
01746
00001
54731

UNSQUEEZ

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5.4TS UNSQUEEZ

P00066	HEIN.	00057				
C45071	COLAR	00051	00057			
P00001	NICT.	00061	00065	00066		
P00070	ENING.					
X00003	EMAC					
X00002	EVSPILL					
P00000	EXIT.					
P00073	I	00025	00053	00063		
C00000	JAVAIL	00021	00041	00041	00052	00052
P00074	IGOTO.					
C00007	INDATP					
P00066	INITIAL.					
C00507	ICUTOP	00024	00026	00027	00030	00031
C01207	ISVDAT	00023			00032	00033
P00075	IS4	00012	00043	00047		
C01734	ITOGC					
P00016	.1	00042	00055			
P00021	.2					
P00043	.3					
P00046	.4	00045				
P00056	.5	00045				
P00062	.6	00017	00020			
P00065	.7	00014	00015			
P00076	J	00010	00023			
C00001	LINKM	00045	00026	00035	00036	00037
		00054	00063	00027	00030	00034
				00044		00045
C01707	MENTIM					
C00006	MEMGSM					
C00000	MRCCELL					
P00077	NHROS	00014	00016			
P00100	NCT	00011	00017	00036	00037	
C00004	NDJMD					
C00005	NEATEV					
C00003	NHROS	00012	00013			
X00001	OWDICT.	00009	00004			
C00000	SCALET					
C00001	SCALETI					
C15531	STATUS					
C01722	SVTIME					
C01719	TAPET					
C00002	TMAX					
P00003	UNSQUEEZ					
00051	SYMBOLS					

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```

SUBROUTINE UPDIR
  CSUM  UPDIR  CUMPR71 *****
  C      UPDATE ENTRY POINT DIRECTORY *****
  CUSE  WCELL  22JUN71 *****
  C      COMMON/195C1/NCCELL,LINKM(7000),STATUS(12000),CGLAR(4000)
  C      WCELL *****
  CEND *****
  COMMON/NEVTOT/NEVTOT,NCIN
  COMMON/NEVINDX/NEVIND,NEVTIME(10),INDEVB(10)
  TIME=JSTON LEVTIME(10)
  EQ=LEVTIME-NEVTIME+LEVTIME
  CORRECTION/SCALE,SCALE,1,MAX,NCORUS,NUIND,NEXTEV,NEROSW,
  1 INDEVB(320),ICUTOP(320),ISVAT(320),MEMTIM,TAPET(10),SVTIME(10)
  2 1TC=0(10)
  IF(INDEVB(1),EQ,0),2
  2 IS=INDEVB(1) $ NI=1 $ IS=INDEVB(1) $ GO TO 4
  1 IF(INDEVB(2),EQ,0)4003
  3 IS=INDEVB(2) $ NI=2 $ IS=INDEVB(2)
  C LINK LIST MEMORY
  4 CONTINUE
  NMAX=NI-1
  5 IF(ISX.EQ.0)700
  6 IP=ISA $ IS=LINKM(ISX+3)
  GO TO 5
  7 IF(INDEVB(NI),EQ,0)1008
  8 LINKM(IPX+3)=INDEVB(NI+1)
  9 N=N+1 $ IS=LINKM(IPX+3)
  GO TO 5
  C LIST MEMORY LINKED
  10 CONTINUE
  IF(NEVTOT-50)30,30,20
  C PUT NH EVENTS INTO EACH LIST EXCEPT LAST.
  20 CONTINUE
  NMAX=NEVTOT/NI+10
  NMAX=NI-1
  INDEVB(1)=IS
  NI=1
  21 IF(NI-400)22,22,25
  22 NC=0
  23 IPX=IS
  IS=LINKM(IPX+3)
  NC=NC+1
  IF(NC-NC)24,24,23
  C TERMINATE THIS LIST
  24 CONTINUE
  LEVTIME(NI)=LINKM(IPX)
  LINKM(IPX+3)=0
  INDEVB(NI+1)=IS
  NI=NI+1
  GO TO 21
  C GO TO END OF LIST AND INSERT MAX TIME.
  25 CONTINUE
  NMAX=NI
  26 IPX=IS $ IS=LINKM(IPX+3)
  IF(IS.EQ.0)27,26
  27 LEVTIME(NX)=LINKM(IPX)

```

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RETURN
30 CONTINUE
INDEXA(I)=IS
UC 31 1=2,MINI
INDEXA(I)=C
EXTIME(I)=TMAX
31 CONTINUE
NEXT \$ GO TO 26
40 CONTINUE
RETURN
END

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54000
55000
56000
57000
58000
59000
60000
61000
62000
63000
64000

5.475 UPDIR

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

00201

00003

UPDIR

19501

NEVIST

EVINDA

ESTOR

J-400ICT.

IDENT

UPDIR

54731

00002

00025

1745

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ED

0

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5.4TS

UPDIU

P00177 NI

C00003 NW PRUS
P00200 NK
X00001 W8 JNCT.
C00000 SCALET
C00001 SCALET
C15531 STATUS
C01722 SVTIME
C01710 TAPET
C00002 TMAX
P00160 TS00001.
P00003 UPDIU
P00153 W50001.
00100 SYMQL5

00014
00126

00130
00000
00140
00004

00154
00150
00003
00157

00025

00043

00047

00053

00057

00077

00100

00117

00125

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EU

J

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```

FUNCTION VLRAID(YIELD,NUN,MOR,FN)
  CSUBH      VLRAID      20AUG70      *****
  COMMON/VULNDATA/PGL(12),PA(12),UG(8),WA(8)
  UPCODE (4,100,NUN) VN$LETTER*AK
  100 FORMAT (F2.0A1,F1.0)
  CRV=YIELD**33333
  IF(X4) 1,1,2
  1 DELTA=.
  IF (LETTER.EQ. RMU ) 19,9
  2 AS=027144 * AK/CRY
  RMU=.10X
  IF (LETTER.EQ. RMU ) 15,5
  3 CASE
  5 AS=2.
  6 Z=(X*X+R)/(2.*X-A)
  IF(ABS(X-Z) .LT. .0005) 8,7
  7 XZ $GC TO 6
  8 WZ=(Z-1.)/(Z+1.)
  DELTA=(21.7991 * 9.1979*WZ*Z)*Z
  9 AVN=DELTA*VN
  15W=1 3FN=6. $GC TO 23
  10 CASE
  15 X=1.
  16 Z=(2.*X*X+R)/(3.*X-A)
  IF(ABS(X-Z) .LT. .0003) 18,17
  17 XZ $GC TO 10
  18 WZ=(Z-1.)/(Z+1.)
  DELTA=(16.3493*WZ*WZ*WZ)*Z
  19 AVN=DELTA*VN
  15W=2 3FN=3.
  23 IF(MOR) 24,24,25
  24 JS=1 $GC TO 26
  25 JS=2
  26 UC 27 1=2,12
  27 CONTINUE
  1=12
  28 IUP=1 3IL=1-1
  OVEAVN=5.*(1-1)
  29 GC TO (29,32),15W
  30 Y$PG(11) $Z=PG(IUP) $GC TO 35
  31 Y$PA(11) $Z=PA(IUP) $GC TO 35
  32 GC TO (33,34),JSW
  33 Y$UG(11) $Z=UG(IUP) $GC TO 35
  34 Y$UA(11) $Z=UA(IUP)
  35 S=(Y-2)*.2
  Y$Y=S*Y
  VLRAID=EXP(Y)*CRY
  END

```


5.0TS

VLRAD

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

VLRAD

VULNDATA
EXTERNAL SYMBOLS

IDENT

00374

00012

00050

VLRAD

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EU

0

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P00350 A	00140	00060	00116	00176	00137	00257	00260
P00351 AVA	00103	00140	00162		00137		
P00352 H	00050	00056	00113		00246		
P00354 REGIN.	00305	00314	00340				
P00353 CNVRT1.	00022	00024	00025				
P00003 CMF-MT.	00031						
P00353 CRY	00035	00045	00247				
P00005 DEC.	00117						
P00354 DELTA	00041	00101	00102	00136	00137		
P00001 DICT.	00014	00020	00030	00032	00246		00260
P00355 OV	00177	00243					
P00306 ENUNG.	00015	00250	00254	00255	00255	00256	00256
P00003 EXIT.	00312						
P00004 EXPF	00245						
P00003 FM	00106	00143					
P00003 FCH4AT.	00042	00051					
P00021 FPG00C1.	00272						
P00033 FPG0002.	00266	00267					
P00105 FPG0003.	00301	00302					
P00142 FPG0004.	00303	00304					
P00144 FPG0005.	00275	00276					
P00323 GETPL.	00201	00270	00277				
P00313 GETPL.	00264	00273	00317				
P00031 GPG0000.	00116						
P00003 HCB	00144						
P00356 I	00154	00155	00164	00166	00167	00177	
P00357 LGTC.	00200	00203	00242				
P00360 IL	00171	00205	00213	00224	00232		
P00254 INIPL.	00115						
P00361 ISW	00104	00161	00177				
P00362 IUP	00110	00210	00216	00227	00235		
P00040 .1	00136	00137					
P00107 .15	00152						
P00111 .16	00126						
P00125 .17	00123	00124					
P00127 .18	00124						
P00137 .19	00143						
P00044 .2	00137						
P00144 .23	00105						
P00147 .24	00145	00145					
P00151 .25	00146						
P00153 .26	00150						
P00164 .27	00163						
P00167 .28	00162	00163					
P00202 .29	00201						
P00205 .30	00204						
P00213 .31	00204						
P00221 .32	00201						
P00224 .33	00223						
P00232 .34	00223						
P00240 .35	00212	00220	00231				
P00053 .5	00152						
P00055 .6	00171						
P00070 .7	00166						


```

SUBROUTINE ZARGMT
  COMMON/ITP/ITP
  COMMON/MYIDENT/MYIDENT
  COMMON/TCORR/TCORR
  CUSE
  RECOV ZARGMT
  COMMON/RECOV/RECOV(5,*,2),TCORR(5,*,2),NMORE(50,*,2),
  & NRES(50,*,2),LSHIFT
  CEND
  RECOV
  WARMHEAD ZARGMT
  COMMON/WARMHEAD/YIELD(50),PODD(50),CEP(50)
  CUSE
  WARMHEAD
  DRKONT ZARGMT
  COMMON/DRKONT/DRKONT(15),INDEGCL(15),INDEGTY(250)
  CEND
  DRKONT
  DIMENSION TEMP(2)
  C
  TERMINATE HISTORY BEFORE ABORTING
  ITPS
  ITCORRZARGMT
  CALL WARMHEAD
  CALL WARMHEAD(ITPCORR+400)
  CALL TEMPtape
  MYIDENT = MM HISTAPE
  CALL SETHEAD
  CALL SKIPFILE(ITP)
  30 BUFFER OUT(ITP,1),NTYPECOM(1),INDEGTY(250)
  40 IF (UNIT(ITP)40:60:50:50)
  50 PRINT 51
  51 FORMAT(40,51)
  60 BUFFER OUT(ITP,1),YIELD(1),YIELD(5,1)
  70 IF (UNIT(ITP)70:90:80:80)
  80 PRINT 51
  90 END FILE ITP
  NEWIND ITP
  CALL ZARGMT
  END

```

5.ATS

ZABCHT

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EU

U

PAGE NO.

2

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ZABCHT

ITP
MYIDENT
TWORU
HECCV
WARHEAD
BRKPNT

EXTERNAL SYMBOLS

THEND.
QBQDICT.
WRWCRD
WRARMAY
TERMTAPE
SETREAU
SKIPFILE
ARCRT
QDQIFUNI
EFT.
NEW.
STH.
NFC.

IDENT

ZABCHT

00134
00016
00001
00001
00001
03101
00226
00447

5.ATS ZABCHT

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X00010	ABCHT	00126							
P00131	HEBIM.	00131							
X00015	WFO.	00046							
C00144	CEPW								
P00005	CRFAT.	00072							
P00001	DICT.	00027	00031	00034	00040	00042	00047	00053	00060
		00075	00101	00106	00111	00114	00117	00122	00125
									00063
									00127
X00012	EFT.								
P00132	ENDING.	00121							
P00000	EXIT.	00021							
P00005	FCM-T.	00132							
P00064	GG0001.	00024							
P00072	GG00002.	00056							
P00112	GG00000.	00064							
P00120	GG00005.	00104							
C00036	INDREGCL	00112							
C00055	INDHEGTY	00050							
P00131	INITIAL.	00041							
C00000	IHECV	00132							
C00000	ITP	00022							
		00120							
		00025							
C00000	IT*CKO								
P00044	.30	00044							
P00051	.40	00043							
P00056	.50	00123							
P00072	.60	00025							
P00077	.70								
P00104	.80								
P00120	.90								
P00005	..100000								
P00006	..100001								
P00007	..51								
C03100	LSHIFT								
C00000	MYIDENT								
C00017	NRLUETYP								
C01440	NACHE								
C02260	NRES								
C00000	NTYPECUM								
C00062	P000								
X00002	UBDICT.								
X00011	URATFUNI								
X00013	WE*								
X00006	SETHEAD								
X00007	SKIPFILE								
X00014	STM.								
P00003	TEMP								
X00005	TENMTAPE								
X00001	TMENU.								
C00620	TPREC								
X00004	WPARAY								
X00003	WR*CKO								
C00000	YIELD								
P00016	ZABCHT								

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FTM5.5

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777 FORMAT:43H ***** PROCESSOR READSUM COMPLETED *****
STOP
END

00000
00000
00000

5.ATS HEADSUM

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HEADSUM

ITYP
TAPES
STIME
NOPRINT
MYIDENT
FILABEL
TAPE TYPE
KNTENT

EXTERNAL SYMBOLS

QBENTRY
THEND.
QBQSTOPS
QBQDICT.
STORAGE
INITAPE
SETREAD
HEADATA
MOREDATA
HEADCUT
GENCUTPT
SPECTRLPT
ENDDATA
NEWUNIT
WRAGZF
STM.
ONSINGL.

IJENT

U0151
U0032
U0001
U0026
U0005
U0001
U0001
U0014
U0001
U0001
U0002

READSUM

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ED

U

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3

S-4TS	HEADSUM	12/20/71	CU	0	PAGE NO.	4
P00147	CMVRII.	00131	00132			
P00003	CMFMT.	00135	00143			
P00001	DICT.	00034	00036			
		00112	00115			
		00100	00111			
X00015	ENDDATA					
P00150	ENDING.					
P00000	EXIT.					
P00003	FORMAT.					
X00013	GENCUTPT					
P00135	GG00000.					
P00143	GG00001.					
C00007	INCMH					
C00002	INDATE					
C00003	INFCMH					
C00000	INIDENT					
X00006	INITAPE					
C00000	INLGTH					
C00001	INMUNG					
C00004	INSECH					
C00005	INTIME					
C00000	ITAPE					
C00000	ITP					
P00062	.1					
P00064	.2					
P00066	.3					
P00111	.5					
P00003	..100000					
P00004	..100001					
P00005	..100002					
P00006	..100003					
P00021	..7777					
P00007	..7778					
C00000	JDAY					
C00003	JHCUR					
C00004	JHIN					
C00001	JHON					
C00002	JTEAR					
C00012	MAXTAPE					
X00011	MCMDATA					
C00000	MYIDENT					
X00016	NEWUNIT					
C00000	NCPRINT					
C00001	NCRTA					
C00000	NCRTD					
C00025	NCRTI					
C00024	NTP					
C00000	NTPTYPE					
X00004	OB01CT.					
X00001	OBENTHY					
X00003	OBSTCPS					
X00021	UNSLGL.					
X00010	READATA					
X00012	READCUT					
P00032	HEADSUM					

5.4TS READSUM

X0007 SETREAD 00055
X0014 SPCTBLPT 00104
X0020 STM 00125
X0005 STORAGE 00041
X0002 THEND 00133
X0017 WRAGZF 00122
00073 SYMCLS

00136

00141

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EO

U

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```

SUMROUTINE AUDATA
  AUDATA 70171 .....
COMMON/TAPES/TAPES(10),MAXTAPES(10),NIP,NKCU
COMMON/FILE/ACTIVE(10),HEADS(10),TACS(10),DETS(10),DLSAPL(10),
  LEND(10),L9(10),NAME..... REC(10),NENT(10),LSCNCH(10)
  TARGETS 242477 .....
COMMON/KEYS/ALM1,ALON,KEYS,NETLCL,KEYFCN,KEYLAL,ACYNED
  KEYUES,KEYISK
COMMON/1/NOACTY(10000)
COMMON/2/ANTRY(250),KPLN(250),KWEB(11),KLA(10),KLA(1000),KLA(10000)
COMMON/3/ANDESTA(1)
  TARGETS .....
  MAHLK 940671 .....
COMMON/MAHES/MAHLES,MAHMD,MAHSM,MAHIS,MAHMDM,MAHLC,MAHMEY
  MAHMDM
  MAHLK .....
COMMON/MAHHEAD/YELDA(50),FFRACH(50),PUUDX(50)
COMMON/8/TYPES/COMNS(15),BTYPES(15),LDCLAS(15),INDRE(250),
  TYPE,NAME(250),CLASSES(250)
  TYPE INTEGER TYPE,NAME,COMNS,BTYPES
EQUIVALENCE (TYPE,COMNS(15))
COMMON/MYIDENT/MYIDENT
COMMON/INDEAN INDEAN FUNCTION CNTRYOWN CNTRYLOC INIAP
COMMON/PROCESS/PLN,PLN,INITEN(100),VALUE(500),DEF(500),LVLGRT(500)
  TYPE INTEGER VALU
  TYPE LOGICAL DEF,LOLGD
COMMON/JITERM/JITERM
COMMON/EDITAPE/INTP,NCU,ITOUT(10),JOUJ
EQUIVALENCE (INDEAN,VALUE( 22))
  TYPE INTEGER INDEAN
EQUIVALENCE (FUNCTION,VALUE( 6))
  TYPE INTEGER FUNCTION
EQUIVALENCE (CNTRYOWN,VALUE( 4))
  TYPE INTEGER CNTRYOWN
EQUIVALENCE (CNTRYLOC,VALUE( 5))
  TYPE INTEGER CNTRYLOC
EQUIVALENCE (INITAP,VALUE( 129))
  TYPE INTEGER INITAP
COECLARE CNTRYLOC,WHUTYPE YIELD CNUTYPEN CNUTYOWN
EQUIVALENCE (CNTRYLOC,VALUE( 155))
  TYPE INTEGER CNTRYLOC
EQUIVALENCE (WHUTYPE,VALUE( 58))
  TYPE INTEGER WHUTYPE
EQUIVALENCE (YIELD,VALUE( 73))
  TYPE REAL YIELD
EQUIVALENCE (WHUTYPEN,VALUE( 147))
  TYPE INTEGER WHUTYPEN
EQUIVALENCE (CNUTYOWN,VALUE( 154))
  TYPE INTEGER CNUTYOWN
COECLARE TYPE CLASS
EQUIVALENCE (TYPE,VALUE( 152))
  TYPE INTEGER TYPE
EQUIVALENCE (CLASS,VALUE( 153))
  TYPE INTEGER CLASS
COECLARE PDUU
EQUIVALENCE (PDUU,VALUE( 80))

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```

TYPE REAL      0000
CODECLARE PRIMETAR
EQUIVALENCE(ORIME,TAM,VALUE( 148 ))
TYPE INTEGER PRIMETAR
CODECLAME IREG
EQUIVALENCE(IREG,VALUE( 51 ))
TYPE INTEGER IREG
CODECLAME DESIG TASK
EQUIVALENCE(DESIG,VALUE( 19 ))
TYPE INTEGER DESIG
EQUIVALENCE(TASK,VALUE( 20 ))
TYPE INTEGER TASK
COMMON/IREG/IREGT
COMMON/KNTWRT/KAUG71 *****
COMMON/KNTWRT/HOMRTU,NCWRTA *****
CEND DATA(NCWRTA=0),(NCWRTU=J) *****
ISW = 1
100 CONTINUE
IF(INDXNC=110,110,101)
101 IF(INDXNC=MAXLOC(103,103,102)
102 PRINT 104
104 FORMAT(2X,INDXNC GREATER THAN MAXLOC )
GO TO 152
103 CONTINUE
NDACN=IGET(KEYOWN,INDXNC,NDACTY)
NDALOC=IGET(KEYLOC,INDXNC,NDACTY)
NDAFCN=IGET(KEYFCN,INDXNC,NDACTY)
NDAREG=IGET(KEYREG,INDXNC,NDACTY)
CHANGE NC= 6
FUNCTION = KFCN(NDACN)
CALL CHANGE
CHANGE NC= 4
CENTRYCN= CENTRY(NDACN)
CALL CHANGE
CHANGE NC= 5
CENTRYLOC= CENTRY(NDALOC)
CALL CHANGE
CHANGE NC= 51
IREG=KREG(NDACN)
110 IF(NTARD11=120,111)
111 NDACN=IGET(KEYOWN,INTAR,NDACTY)
NDALOC=IGET(KEYLOC,INTAR,NDACTY)
NDAREG=IGET(KEYREG,INTAR,NDACTY)
CHANGE NC= 154
CENTRYCN= CENTRY(NDACN)
CALL CHANGE
CHANGE NC= 155
CENTRYLOC= CENTRY(NDALOC)

```

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```

CALL CHANGE
CNTYLCT=INTY(NUALSC)
INRETEREG(INDAREO)
C  FILL LONGTYPE DATA FOR TARGETS
JMAAKLS+1
112 JJJ-1
IF(INDCLAS(J)-INTAN) 113,113,112
113 CONTINUE
CHANGE CLASST
NC= 153
CALL CHANGE
CLASST=CLASSES(J)
JENTYPE+1
114 JJJ-1
IF(INDREG(J)-INTAN) 115,115,114
115 CONTINUE
CHANGE TYPE1
NC= 152
CALL CHANGE
TYPE1=TYPENAME(J)
120 CONTINUE
IF(WMDTYPE)131,140,131
131 CONTINUE
CHANGE PDUO
NC= 96
CALL CHANGE
PDUO=PDUO(X(WMDTYPE))
CHANGE YIELD
NC= 73
CALL CHANGE
YIELD=YIELD(X(WMDTYPE))
140 IF(WMDTYPE)141,150,141
141 CONTINUE
CHANGE YIELD
NC= 73
CALL CHANGE
YIELD=YIELD(X(WMDTYPE))
150 CONTINUE
NTP=5
JCUT=ITAPE(5)
CALL GENTLES
NCWID=NCWID+1
IF(NUMREC(JCUT)-1000000000) 167,167,100
166 CALL ENDHEEL
167 CONTINUE
CALL CUTITEM
IF(INRCUT.EQ.2).AND.(PRIMETAN.EQ.1))151,152
151 JCUT = ITAPE(6) 3 NTP = 6
CALL CUTITEM
NCRTA=NCRTA+1
IF(NUMREC(JCUT)-1000000000) 152,152,169
169 MYIDENT=RHMHISTAGZ
CALL ENDHEEL
152 CONTINUE
GO TO (160,165)ISM

```

F1A5.5

```
ENTRY RESTORE
160 CONTINUE
  GO 1 I=1,NV+2
  L=INITCM(I)
  VALUE(L)=INITEM(I+1)
  DEF(L)=0
  1 CONTINUE
  NI=NV+0
165 ISM=1
  RETURN
ENTRY ADDEP
  ISM=2
  GO TO 160
END
```

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PAGE NO.

89600
90600
91600
92600
93600
94600
95600
96600
97600
101600
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105600

5.4TS

ADDATA

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ED

PAGE NO.

5

ADDATA

IDENT

PROGRAM LENGTH
ENTRY POINTS

BLOCK NAMES

ADDATA
ADDRESS
RESUME
TAPES
FILE
KEYS
1
2
3
MAXES
WARHEAD
BYTYPE
NYIDENT
PROCESS
EDITCM
EDITAPE
IREGS
KNITWT

00377
00014
00347
00316
00026
00150
00011
27340
20514
00001
00010
00226
J1433
00001
01173
00001
00015
00001
00002

EXTERNAL SYMBOLS

TREND
W310000
W80010
PRITCH
I001
CHANGE
GENTLES
ENDREEL
CUTITEM
STH

P00114	.110	00023	00023	00267	00271	00305	00305	00171	00176	00177	00201	00200	00202	00205
P00116	.111	00023	00023	00267	00271	00305	00305	00171	00176	00177	00201	00200	00202	00205
P00157	.112	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164
P00165	.113	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164	00164
P00177	.114	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204
P00205	.115	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204	00204
P00214	.120	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115	00115
P00216	.131	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215
P00233	.140	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215	00215
P00235	.141	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234
P00244	.150	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234	00234
P00272	.151	00037	00037	00267	00271	00305	00305	00171	00176	00177	00201	00200	00202	00205
P00313	.152	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315
P00322	.160	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315	00315
P00345	.165	00257	00257	00257	00257	00257	00257	00257	00257	00257	00257	00257	00257	00257
P00260	.166	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256
P00264	.167	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256	00256
P00307	.169	00306	00306	00306	00306	00306	00306	00306	00306	00306	00306	00306	00306	00306
P00012	.100000	00260	00260	00260	00260	00260	00260	00260	00260	00260	00260	00260	00260	00260
P00013	.100001	00307	00307	00307	00307	00307	00307	00307	00307	00307	00307	00307	00307	00307
P00003	.104	00032	00032	00032	00032	00032	00032	00032	00032	00032	00032	00032	00032	00032
P00371	J	00156	00156	00156	00156	00156	00156	00156	00156	00156	00156	00156	00156	00156
C00014	JGUT	00246	00246	00246	00246	00246	00246	00246	00246	00246	00246	00246	00246	00246
C00007	KEYDES	00054	00054	00054	00054	00054	00054	00054	00054	00054	00054	00054	00054	00054
C00004	KEYFCN	00047	00047	00047	00047	00047	00047	00047	00047	00047	00047	00047	00047	00047
C00005	KEYLAT	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125	00125
C00003	KEYLSC	00042	00042	00042	00042	00042	00042	00042	00042	00042	00042	00042	00042	00042
C00002	KEYSWN	00061	00061	00061	00061	00061	00061	00061	00061	00061	00061	00061	00061	00061
C00006	KEYREG	00070	00070	00070	00070	00070	00070	00070	00070	00070	00070	00070	00070	00070
C00010	KEYTSK	00172	00172	00172	00172	00172	00172	00172	00172	00172	00172	00172	00172	00172
C00400	KFCN	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076
C01001	KLASSES	00112	00112	00112	00112	00112	00112	00112	00112	00112	00112	00112	00112	00112
C00000	KLAT	00333	00333	00333	00333	00333	00333	00333	00333	00333	00333	00333	00333	00333
C01013	KLATPK	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076
C00001	KLNG	00104	00104	00104	00104	00104	00104	00104	00104	00104	00104	00104	00104	00104
C00000	KNTRY	00152	00152	00152	00152	00152	00152	00152	00152	00152	00152	00152	00152	00152
C01000	KREG	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076	00076
P00372	L	00154	00154	00154	00154	00154	00154	00154	00154	00154	00154	00154	00154	00154
C20513	LATLNG	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C01153	LGLSB	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00144	LCNCRW	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00002	MAXASH	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00004	MAXBOM	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00007	MAXGHP	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00000	MAXKLS	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00005	MAXLOC	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00003	MAXNIS	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00006	MAXREG	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00012	MAXTAPE	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00001	MAXMHD	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00000	MYIDENT	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00104	NAME	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025
C00002	NC	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025	00025

5-4TS

ADUATA

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LU

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PAGE NO.

8

C00000 NOESTK
 C00001 NOACTY
 P00373 NOAFCA
 P00374 NOALCC
 P00375 NOALCN
 P00376 NOALRG
 C00132 NEAT
 C00000 NI
 C00001 NCUT
 C00001 NCWRTA
 C00001 NCWRTD
 C00025 NRCUT
 C00024 NRP
 C00016 NTPE
 C00120 NUMREC
 C00001 NV
 C00011 CJITEM
 C00266 PUD
 C00144 PDUX
 C00372 PRMETAR
 X00004 PRITEM
 X00002 G310040
 X00003 U8401Cf
 C00012 MEADST
 P00316 MESTCME
 X00012 STM
 C00172 TASK
 X00001 THEND
 P00343 TS00001
 C00447 TYPENAME
 C00376 TYPEI
 C00147 VALUE
 C00240 WUTYPE
 C00371 WUTYPEN
 P00332 W500001
 C00257 YIELD
 C00000 YIELDX
 00216 SYMGLS

00133

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```

CSUBR      SUBROUTINE ADDIN(VAM,NC,INCUS,K,LOG)
          DIMENSION V(N,2),AM(N,N,2)
          TYPE INTEGER V
          CUECLAREA TYPE      PARRIVE
          COMMON/PROCESS/AL,MYNC,INIT=1,LOG,VALUE(500),DEF(500),LULCB(500)
          TYPE INTEGER VALUE
          TYPE LOGICAL DEF,LULCB
          COMMON/EDITERM/ISITEM
          COMMON/EDITAPE/INTP,NCUT,ITCUT(10),JCUT
          EQUIVALENCE(TYPE,VALUE( 2))
          TYPE INTEGER TYPE
          EQUIVALENCE(PARRIVE,VALUE( 104))
          TYPE REAL PARRIVE
          GO TO 73 IF I.NCT
          IF (TYPE .EQ. V(J,K)) GO TO 73
          72 AR(1,J,K)=AR(1,J,K)+PARRIVE
          GO TO 74
          73 CONTINUE
          GO TO (777,74),NCUC
          777 IF (NCT .GE. N) GO TO 773
          772 PRINT 774,TYPE
          774 FORMAT(15H TOO MANY TYPES,24,AB,24,1/HE INST ONE MISSING)
          NCUC=2
          GO TO 74
          773 NCT=NCT+1
          V(NCT,K)=TYPE
          AR(1,NCT,K)=AR(1,NCT,K)+PARRIVE
          74 CONTINUE
          RETURN
          END

```

1000
22000
2000
3000
4000

5000
6000
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
18000
19000
20000
21000

5.4TS

AUDIN

12/20/71

LU

J

PAGE NO.

2

IDENT AUDIN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ADDIN

00406
00017

PROCESS
EDITMM
EDITAPE

01173
00001
00015

EXTERNAL SYMBOLS

THEND.
G8UDICT.
STM.
GMSINBL.

5.415	AUDIN	00074	00144	00155	00167	00233	12/20/11	CU	00215	00223	00227	PAGE NO.
P00100	IN00004.	00074	00144	00155	00167	00233						
P00003	INITIEM	00074										
P00234	INITIAL.	00074										
C00000	INIP	00074										
C00000	IS4TERM	00074										
C00002	ITCUT	00074										
P00033	.72	00074										
P00050	.73	00074										
P00100	.74	00074										
P00053	.772	00074										
P00065	.773	00074										
P00050	.777	00074										
P00003	.777	00074										
P00405	J	00074										
C00014	JCUT	00074										
P00003	K	00133										
C01153	LGCS	00171	00173	00176	00205	00250	00251					
P00003	M	00051	00174	00177	00201	00233	00212					
P00003	N	00051										
C00002	NC	00052										
P00003	NCT	00052										
C00000	N1	00054										
P00003	NCUC	00054										
C00001	NCUT	00054										
C00031	NV	00117										
P00114	P00000.0	00117										
C00412	PARRIVE	00035										
P00252	PF00002.	00265										
P00264	PF00003.	00265										
P00300	PF00004.	00301										
P00306	PF00005.	00307										
P00312	PF00006.	00313										
P00316	PF00007.	00317										
P00334	PF00010.	00335										
P00360	PF00011.	00000										
X00002	UNADICT.	00101										
X00004	UNSLINGL.	00207										
P00112	WELCON.	00354										
X00003	STM.	00061										
X00001	TEND.	00026										
P00042	ISUB001.	00027										
C00130	TYPE	00025										
P00121	UP00000.	00114										
P00132	UP00002.	00107										
P00147	UP00003.	00070										
P00160	UP00004.	00031										
P00003	V	00073										
C00147	VALUE	00043										
P00027	WS00001.											
	00147 SYMCLS											

```

SUBROUTINE BDAMA
  CSUBR      BDAMA      9AUG71
  COMMON/HISTOUT/NSIDE,NIBASE,NINDV,NINTAN,NNWIT,P,HTIME,NEVENT,
  INPLACE,NLTYPE,NICLASS,NIME,NIALERT,
  3NDGX,NDGY,NDGZ,NMAGX,NMAGY,NMAGZ,NCOL,NINTAN(40),NCODEC(40),
  *HISTOUT(200)
  EQUIVALENCE (NSIDE,HISTOUT(1)),(NINTAN,HISTOUT(1))
  COMMON/TAPE/INTYPE
  COMMON/TCORD/TCORD
  DATA INIT=0
  CUSE      MAXBLK      9AUG71
  COMMON/PAKES/MAXKLS,MAXM,MAXAS,MAXIS,MAXABCH,MAXLUC,MAXKEU
  1,MAXXUP
  CEND      MAXBLK
  EQUIVALENCE(NHISTOUT(21),PAKES)
  CDECLANE PRIMETAN INDEANC INDV *MULTYPE INTAN
  COMMON/PROCESS/NI,NV,NC,INTEN(100),VALUE(500),DEF(500),LGLCB(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,LGLCB
  COMMON/EDITERM/ISITEM
  COMMON/EDITAPE/IRIP,INDOUT,ITOUT(10),JOUT
  EQUIVALENCE (PRIMETAN,VALUE( 148))
  TYPE INTEGER PRIMETAN
  EQUIVALENCE (INDEANC,VALUE( 22))
  TYPE INTEGER INDEANC
  EQUIVALENCE (INDV,VALUE( 128))
  TYPE INTEGER INDV
  EQUIVALENCE (*MULTYPE,VALUE( 56))
  TYPE INTEGER *MULTYPE
  EQUIVALENCE (INTAN,VALUE( 129))
  TYPE INTEGER INTAN
  CDECLANE UGY DHCH *MUK *MUY *MCH
  EQUIVALENCE (UGY,VALUE( 144))
  TYPE INTEGER UGY
  EQUIVALENCE (DHCH,VALUE( 146))
  TYPE INTEGER DHCH
  EQUIVALENCE (AGA,VALUE( 141))
  TYPE INTEGER AGA
  EQUIVALENCE (AGY,VALUE( 142))
  TYPE INTEGER AGY
  EQUIVALENCE (AMCH,VALUE( 145))
  TYPE INTEGER AMCH
  CDECLANE TIME PARRIVE CODE UGA
  EQUIVALENCE (TIME,VALUE( 124))
  TYPE REAL TIME
  EQUIVALENCE (PARRIVE,VALUE( 144))
  TYPE REAL PARRIVE
  EQUIVALENCE (CODE,VALUE( 138))
  TYPE INTEGER CODE
  EQUIVALENCE (UGA,VALUE( 143))
  TYPE INTEGER UGA
  KEYINTAN=KEYMAKE(200,24)
  KEYCODE=KEYMAKE(200,24)
  CHANGE PRIMETAN
  NC= 148
  CALL CHANGE

```


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```

PRIMEIAR=C
CHANGE INUEANC
  NC= 22
  CALL CHANGE
  INUEANC=ININASE
CHANGE INUV
  NC= 129
  CALL CHANGE
  INUEZINUV
CHANGE INHITYE
  NC= 34
  CALL CHANGE
  INHITYE=INHITYP
CHANGE INHIVE
  NC= 104
  CALL CHANGE
  INHIVE=INHIVE
  GC TO (51+52)*INHITYE
  51 INHIVE=1.
  52 INHIVE=PARA
  53 CONTINUE
C   NCCL--NUMBER OF COLOCATED TARGETS
  IF (NCCL) 1+12
  1 NCCL=1
  2 CONTINUE
  UC TO 1+1,NCCL
  J=NCCL-1+1
CHANGE INIAR
  NC= 129
  CALL CHANGE
  INIAR=IGET(KEYINIAR,J,NHISOUT(20))
  IF (INIAR) 110,110,101
  101 IF (INIAR=MAXLOC) 120,120,110
  110 INIAR=INI+1
  IF (INI=10) 102,120,120
  102 PRINT 111,INIAR,TIME
  111 FORMAT(7H INIAR=110,10A,10,5)
  PRINT 112,(NHISOUT(K),K=1,(=CRD)
  112 FORMAT(5(=A,31B))
  120 CONTINUE
CHANGE CODE
  NC= 134
  CALL CHANGE
  CODE=IGET(KECODE,J,NHISOUT(20))
  IF (J=1) 13+4,4,8
C   TARGET IS FIRST MEMBER OF A COLOCATED ISLAND, OR AN INDIV TARGET
C   THUS SET PRIMEIAR TO 1 AND ADD THE GROUND ZERO DATA
  4 CONTINUE
  PRIMEIAR=1
CHANGE UGX
  NC= 1+3
  CALL CHANGE
  UGX=NDGX
CHANGE UGV
  NC= 144
  CALL CHANGE

```

18000
1900020000
2100022000
2300024000
2500026000
2700028000
2900030000
3100032000
3300034000
3500036000
3700038000
3900040000
4100042000
4300044000
4500046000
4700048000
4900050000
5100052000
5300054000
5500056000
57000

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3

US:ENGJY
CHANGE UNCH
NC= 146
CALL CHANGE
UNCH=NUGZ
CHANGE AGY
NC= 141
CALL CHANGE
AGX=NUX
CHANGE AGY
NC= 142
CALL CHANGE
AUTENAGY
CHANGE AGY
NC= 145
CALL CHANGE
ANCHENAGZ
CALL ADDRESS
CALL WHAGZ
GO TO 10
8 CALL ADDRESS
10 CONTINUE
CALL RESTORE
RETURN
END

58000
59000
60000
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69000
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74000

FTNS.5

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UGVENDUY
CHANGE UNCB
NC= 146
CALL CHANGE
UNCB=NUGZ
CHANGE AGA
NC= 141
CALL CHANGE
AGA=NAUX
CHANGE AGY
NC= 142
CALL CHANGE
AGY=NAUY
CHANGE UNCB
NC= 145
CALL CHANGE
UNCB=NUGZ
CALL ADMEP
CALL WPAUZ
GO TO 10
H CALL ADMEP
TO CONTINUE
CALL RESTORE
RETURN
END

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00010
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00015

BDAMK
HISTOUT
TAPETYPE
TACRU
WAKES
PROCESS
ENTER
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EXTERNAL SYMBOLS

THRU.
ADDICT.
KEYMAK
CHANGE
IGET
ADDRESS
WRAGZ
RESTORE
STM.
UNINOL.

NAME	12/20/71	CU	U	NAME NO.	S
KG0705	ADJDEP	00242	00055		
CG0303	ASX	00222	00222		
CG0304	AST	00227	00227		
CG0307	ASX	00234	00234		
PG0022	MDAMA	00022	00022		
PG0254	PELINA	00254	00254		
KG0004	CHAYNE	00341	00341		
PG0253	CHAYNE	00224	00224		
CG0309	CGJE	00137	00137		
PG0004	CGMFL	00143	00143		
CG1133	DEP	00203	00203		
CG0305	DGA	00210	00210		
CG0306	DGT	00215	00215		
CG0370	DGCH	00064	00064		
PG0001	DLCT	00142	00142		
		00250	00250		
		00251	00251		
PG0255	ELUING	00255	00255		
PG0000	EXIT	00000	00000		
PG0004	FCMFL	00132	00132		
PG0143	GG0000	00143	00143		
PG0161	GG0001	00143	00143		
CG0000	HLSTCUT	00000	00000		
CG0005	HLTIME	00005	00005		
PG0262	I	00107	00107		
AK0005	IGLT	00115	00115		
PG0203	IGLTC	00067	00067		
CG0174	IGDEAKG	00050	00050		
CG0340	INDV	00055	00055		
CG0003	INITEN				
PG0254	INITIAL	00065	00065		
PG0003	INT	00120	00120		
CG0347	INTAW	00121	00121		
CG0003	INTMC				
CG0000	INP				
CG0000	ISATEM				
CG0002	ITCUT				
CG0000	ITCSTU	00155	00155		
PG0102	I	00100	00100		
PG0244	I	00241	00241		
PG0123	I	00123	00123		
PG0132	I	00131	00131		
PG0125	I	00121	00121		
PG0161	I	00125	00125		
PG0104	I	00101	00101		
PG0175	I	00173	00173		
PG0072	I	00070	00070		
PG0075	I	00071	00071		
PG0077	I	00074	00074		
PG0242	I	00173	00173		
PG0004	I	00135	00135		
PG0014	I	00140	00140		
PG0244	J	00117	00117		
		00172	00172		

C00014	JSUT	00150	00151	00154					
P00265	K	00037	00167						
P00266	KEYCODE	00032	00117						
P00267	KEY1-TAH	00026	00033						
K00003	KEYMAKE								
C01153	LSLCH								
C00002	MAASM								
C00004	MAABCM								
C00007	MAAGHP								
C00000	MAAKLS								
C00005	MAALCC								
C00003	MAAMIS								
C00006	MAAREG								
C00001	MAAWHD								
C00017	NAUX	00221	00221						
C00020	NAGY	00226	00226						
C00021	NAGZ	00233	00233						
C00002	NC	00040	00040						
C00073	NC3DEC	00234	00211						
C00022	NCCL	00077	00077						
C00014	NDGX	00202	00202						
C00015	NDGY	00207	00207						
C00016	NDGZ	00214	00214						
C00006	NEVENT								
C00000	NH1STGUT	00120	00152						
C00000	NI								
C00013	NI1LENT								
C00011	NI1CLASS								
C00001	NI1BASE	00047	00047						
C00002	NI1MOV	00054	00054						
C00003	NI1TAH								
C00012	NI1REG								
C00010	NI1TYPE								
C00004	NN1TYP	00061	00061						
C00001	NCUT								
C00007	NPLACE								
C00000	NSIDE								
C00000	NI1TYPE	00066	00066						
C00001	NV								
C00024	PARR	00075	00075						
C00012	PARRIVE	00073	00073						
C00372	PRIMETAN	00043	00175						
X00002	WRDICT	00000	00023						
X00012	QNSINGL	00252							
X00010	RESTORE	00247							
X00011	STM	00133	00144						
X00001	THEND	00141	00157						
C00342	TIME	00140							
P00245	TS00001	00105							
P00155	TS00002	00150							
C00147	VALUE								
C00240	PHOTYPE	00062	00062						
X00007	WR45Z	00237							

5.415

BUAMX

PO0100 #S000001.
PO0151 #S000002.
00152 SYMBOLS

00246
00156

00246
00156

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LU

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PAGE NO.

7

1

00021
00011
00001
0036
0008
0002
0009
0035
0034
0005
0002
0034
0001

FTNS.5

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NC= 128
CALL CHANGE
INOV=NINUV
CHANGE ZONE
NC= 28
CALL CHANGE
ZONE=NINZONE
CHANGE NDECCOYS
NC= 80
CALL CHANGE
NDECCOYS=NDECCOYS
CHANGE IALT
NC= 134
CALL CHANGE
IALT=NIALT
CHANGE NCM
NC= 77
CALL CHANGE
NC=NCM
CHANGE DELAY
NC= 125
CALL CHANGE
DELAY=HDELAY
CHANGE RCODE
NC= 139
CALL CHANGE
BCODE=NBCODE
CHANGE PARRIVE
NC= 164
CALL CHANGE
GC TO (51,52).NTTYPE
51 PARRIVE=1.
GC TO 53
52 PARRIVE=PARR
53 CONTINUE
C IF(EVENT-R)3+8+3
LOCAL ATTRITION
C 8 CONTINUE
CHANGE IDUD
NC= 140
CALL CHANGE
IDUD=NDUD
GC TO 7
3 IF(EVENT-14)5,14+5
C ASK LAUNCH EVENT
14 CONTINUE
CHANGE ASMTYPE
NC= 59
CALL CHANGE
ASMTYPE=NASMTYPE
C CLASS=BCDBCM
LAUNCH CR BOMBER LOCAL ATTRITION
GC TO 6
5 IF(EVENT.EQ.2.OR.EVENT.EQ.8)7+6
C RECOVERY CR KILL AFTER RECOVERY
6 IF(EVENT.EQ.16 .OR. EVENT.EQ.19)18+4

19000
20000

21000
22000

23000
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28000

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18 IF INDEPEN 9,10,9
   9 IR=INPLACE/64
   IDEPEN=INPLACE-IR*64
   CHANGE PLACE
   NC= 132
   CALL CHANGE
   PLACE=INDEPEN
   ICSR=IDEPEN
   CHANGE IOTHR
   NC= 53
   CALL CHANGE
   IOTHR=IR
   GO TO 7
10 CONTINUE
   CHANGE PLACE
   NC= 132
   CALL CHANGE
   PLACE=INPLACE
   GO TO 7
4 CONTINUE
   CHANGE PLACE
   NC= 132
   CALL CHANGE
   PLACE=INPLACE
7 GO TO (1,2,1,1,1,1,1,2,2,1,1,1,1,1,2,2,1,1,1) NUCODE
1 CALL ADRATA
   RETURN
C DEAD BASE,KILLED,ABORT,REFUEL ABORT OR NO TANKER AVAIL
2 CALL BOMBFX
   RETURN
   END
55000
56000
57000
58000
59000
60000
61000
62000
63000
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65000
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68000
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77000

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5.415 BOMBANDT

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EU 0

PAGE NO.

4

IDENT BOMBANDT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

BOMBANDT
00237
00003

WISTCUT
BCDKLS
TAPSTIPE
PROCESS
EDITERM
EDITAPE

00310
00005
00001
01173
00001
00015

EXTERNAL SYMBOLS

08001C1.
CHANGE
ADATA
BOMBFA

S.ATS BOMBANDOT

12/20/71 00 0 PAGE NO. 5

K00003	ADUATA	00221							
C00241	ASMTYPE	00116							
C00003	BCDASH	00117							
C00000	BCDASH	00117							
C00001	BCDASH	00117							
C00002	BCDASH	00117							
C00004	BCDASH	00117							
C00361	BCDASH	00117							
P00227	BEIGIN.	00057							
P00003	BOMBANDOT	00003							
K00004	BOMBANDOT	00224							
K00002	CHARGE	00011							
C00147	CLASS	00120							
C01131	DEF	00120							
C00343	DELAY	00052							
P00001	DICT.	00005							
C00023	DOWN	00114							
P00230	ENDING.	00300							
C00350	EVENT	00074							
P00000	EXIT.	00131							
C00031	DELAY	00230							
C00000	MISTOUT	00051							
C00005	TIME	00040							
C00354	IALT	00040							
P00233	ICM	00152							
P00234	ICM	00151							
C00362	ICM	00104							
P00124	IF00001.	00104							
P00131	IF00002.	00177							
P00235	IGTC.	00064							
C00152	INDEX	00114							
C00174	INDEX	00021							
C00102	INDEX	00021							
C00346	INDEX	00006							
C00003	INITIAL.	00157							
P00227	INITIAL.	00140							
C00000	INITIAL.	00157							
C00233	ICM	00140							
P00236	IR	00156							
C00000	IS-TERM	00156							
C00002	ITCUT	00156							
P00161	10	00202							
P00221	11	00215							
P00111	14	00214							
P00133	18	00107							
P00224	2	00140							
P00106	3	00201							
P00170	4	00076							
P00122	5	00132							
P00067	51	00110							
		00065							

DATA	NAME	12/20/71	CU	V	PAGE NO.	6
00072	AC					
00073	AC					
00074	AC					
00075	AC					
00076	AC					
00077	AC					
00078	AC					
00079	AC					
00080	AC					
00081	AC					
00082	AC					
00083	AC					
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00111	AC					
00112	AC					
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00195	AC					
00196	AC					
00197	AC					
00198	AC					
00199	AC					
00200	AC					

12/20/11

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SUBROUTINE HOMPER
  CSUBR      BCBFX      START
  COMMON/HISTOUT/MSIDE,NINDASE,NINDVN,NINITAM,NNTYP,NTIME,NEVENTI,
  1NPLACE,NLTYPE,NCLASS,NIMEG,NIALERT,NDUO,
  2NINZONE,NNOCCOYS,NIALI,NWCM,NASMTYPE,NSCODE,DUM(5),NMHT,NMELAY,
  3TINCN(40),INDPN(40),INDEN(40),NMTYPEN(6),NHISTOUT(200)
  EQUIVALENCE (MSIDE,NHISTOUT(1)),(NMTYPEN,NHISTOUT)
  CUECLANE1 TIME      TIMEN      PLACEN      EVENTIN      WHDTYPEN
  COMMON/PROCESS/NL,NV,NC,NITEM(100),VALUE(500),DEF(500),LULCO(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,LULCO
  COMMON/EDITERM/IS,ITERM
  COMMON/EDITAPE/INT,P,NCOUT,ITOUT(10),JOUTF
  EQUIVALENCE (TIME,VALUE(124))
  TYPE REAL TIME
  EQUIVALENCE (TIMEN,VALUE(123))
  TYPE REAL TIMEN
  EQUIVALENCE (PLACEN,VALUE(133))
  TYPE INTEGER PLACEN
  EQUIVALENCE (EVENTIN,VALUE(131))
  TYPE INTEGER EVENTIN
  EQUIVALENCE (WHDTYPEN,VALUE(147))
  TYPE INTEGER WHDTYPEN
  CUECLANE ASMTYPE
  EQUIVALENCE (ASMTYPE,VALUE(59))
  TYPE INTEGER ASMTYPE
  J=0
  C OUTPUT STATE OF EVENT BEFORE IT FAILED
  CALL ADREP
  C PROCESS EVENTS MISSED BY THE BOMBEN OR TANKEN
  DO 10 I=1,NMHT
  CHANGE  TIME
  NC= 123
  CALL CHANGE
  TIME=TIME+TINCN(I)
  CHANGE  EVENTIN
  NC= 131
  CALL CHANGE
  EVENTIN=INDEN(I)
  IF (EVENTIN-14) 13,12,13
  12 CONTINUE
  CHANGE  ASMTYPE
  NC= 59
  CALL CHANGE
  ASMTYPE =INDPN(I)
  K=1+I
  INDEN(K)=8
  GO TO 14
  13 CONTINUE
  CHANGE  PLACEN
  NC= 133
  CALL CHANGE
  PLACEN=INDPN(I)
  14 -IF (EVENTIN-8) 11,5,11
  5 J=J+1
  CHANGE  WHDTYPEN

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NC= 147
CALL CHANGE
WHUTYPEN=WTYPEN(IJ)
11 CALL ADDRHP
10 CONTINUE
CALL RESTORE
RETURN
END

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2

31000
32000
33000
34000
35000
36000

SATS BOMBFA

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00 0

PAGE NO.

3

IDENT BOMBFA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

00112

BOMBFA

00003

HISTOCT
PROCESS
EDITERM
EDITAPE

00110

01173

00001

00015

EXTERNAL SYMBOLS

00001CT.
ADDRESS
CHANGE
HESTCHE

5.475

BCHRFX

PAGE NO.

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CU

V

4

X00002	ADDRP	00011	00073				
C00241	ASMTYPE	00042	00042				
P00103	BEGIN.	00104					
P00003	BCHRFX	00003					
X00003	CHANGE	00017	00024	00036	00052	00066	
C01133	DEF	00005	00012	00020	00021	00037	00074
P00001	DICT.						00101
C00023	UUM						
P00105	ENDING.	00006	00102	00103			
C00351	EVENIN	00031	00031	00057	00057		
P00000	EXIT.	00106					
C00031	MORLAY						
C00000	MISCUT						
C00005	MTIME						
P00107	I	00013	00022	00040	00043	00054	00075
C00152	INDEN	00030	00030	00046	00046		
C00102	INDEN	00041	00041	00055	00055		
C00003	INITEM						
P00103	INITIAL.	00006					
C00000	INTP						
C00000	IS+TERM						
C00002	ITCUT						
P00075	.10						
P00073	.11	00061	00061				
P00034	.12	00032	00033				
P00050	.13	00043					
P00057	.14	00047					
P00052	.15	00060					
P00110	J	00010	00062	00063	00070		
C00014	JCUT						
P00111	K	00044	00045				
C01153	LGLCH						
C00021	NASMTYPE						
C00022	NACQUE						
C00002	NC	00015	00016	00045	00034	00055	00065
C00014	NDU						
C00056	NEVENT						
C00000	NMISCUT						
C00000	NI						
C00013	NIALERT						
C00017	NIALT						
C00011	NICLASS						
C00001	NINDASE						
C00002	NINDV						
C00003	NINTAM						
C00015	NINTONE						
C00012	NIRE3						
C00010	NITYPE						
C00030	NMTT						
C00020	NMCN	00076	00076				
C00015	NNECCYS						
C00004	NN#TYP						
C00001	NCUT						
C00007	NPLACE						

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CU

U

PAGE NO.

5

CU0000 NSIDE
CU0001 NV
CU0022 NWTYPEN
CU0353 PLACEN
CU0001 U8WDICT.
CU0004 WESTORE
CU0342 TIME
CU0341 TIMEN
CU0032 TIMCN
PU0076 TSU0001.
CU0147 VALUE
CU0371 WWTYPEN
PU0015 W5U0001.
00103 SYMBOLS

CU071
CU056
CU000
CU100
CU021
CU023
CU022
CU014
CU072
CU077

719

5.415 CLAUWA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

CLAUWA

HISTOUT
PROCESS
EDITERR
EULTAPE

EXTERNAL SYMBOLS

JBDDICT.
CHANGE
A0DATA

00046
00003
00010
01173
00001
00015

IDENT CLAUWA

12/20/11

EU

V

PADE NC.

2

K00003 ACQUA
 P00004 BEGIN
 X00002 CHANGE
 P00003 CLAUXX
 C00360 CODE
 C00113 DEF
 P00001 DICT
 P00005 ENDING
 P00000 EXIT
 C00000 MISTOUT
 C00005 TIME
 C00174 INDEXAC
 C00346 INOV
 C00003 INITEM
 P00004 INITIAL
 C00347 INTAH
 C00000 INP
 C00000 IS4TERM
 C00002 ITOUT
 C00014 JCUT
 C00154 LGLCH
 C00002 NC
 C00015 NCODE
 C00014 NDUD
 C00000 NEVENT
 C00000 NHISTOUT
 C00000 NI
 C00013 NIALERT
 C00011 NICLASS
 C00001 NIMBASE
 C00002 NINDV
 C00003 NINTAH
 C00012 NIMEV
 C00010 NITYPE
 C00004 NNWTP
 C00001 NGUT
 C00007 NPLACE
 C00000 NSIDE
 C00001 NV
 X00001 Q84DICT
 C00147 VALUE
 C00240 WHUTYPE
 C00052 SYMBGLS

12/20/71

PAGE NO.

1

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SUHROUTIN ENOREEL
ENDTAPE 2SEP/1
COMMON/ITP/ITP
CUECLAREA SIDE
COMMON/PROCESS/NI,NV,NC,INITEM(100),VALUE(500),DEF(500),LGLCD(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEF,LGLCD
COMMON/EDITERM/IS=TERM
COMMON/EDITAPE/INIP,NCOUT,ITCUT(10),JCUT
EQUIVALENCE(SIDE,VALUE( 3))
TYPE INTEGER SIDE
COMMON/TAPES/ITAPE(10),MAXTAPE(10),NTP,NKOUT
PRINT 100,NTP,ITAPE(NTP)
100 FORMAT(10I10,ENDTAPE,0A,0H1TAPE(,12,2H)=,12)
CHANGE SIDE
NC= 3
CALL CHANGE
SIDE = 7HENDTAPE
JCUT = ITAPE(NTP)
CALL CUTITEM
SIDE = INITEM(2)
NI = NV = 0
CALL ENODATA(JCUT)
WRITE(04,101)ITP
101 FORMAT(42H0PLEASE LOAD A NEW FULL REEL TAPE ON UNIT 15)
PAUSE 1
10 ITP = ITAPE(NTP)
CALL SETWRITE
RETURN
END

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1000
7000
2000
3000

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7000

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10000
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18000
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20000
21000

5.4TS ENDREEL 12/20/71 0 PAGE NO. 2

IDENT ENDREEL

00115
00031
00001
01173
00001
00015
00026

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

ENDREEL

ITP
PROCESS
EDITERM
EDITAPE
TAPES

EXTERNAL SYMBOLS

THEND.
000PAUSE
000DICT.
CHANGE
CUTITEM
ENDDATA
SETWRITE
STM.
000SINGL.

5.4TS ENDPEEL

12/20/71

10

10

10

10

10

10

10

10

P00113 BEGIN.
 X00004 CHANGE
 P00112 CNTRL.
 P00003 CRPAT.
 C0113 DEF
 P00001 DICT.
 A00006 ENDATA
 P00114 ENDING.
 P00031 ENDREEL
 P00000 EXIT.
 P00003 FORMAT.
 P00047 GEODUCT.
 P00100 G000001.
 C00003 INITEM
 P00113 INITIAL.
 C00000 INTP
 C00000 IS*TERM
 C00000 ITAPE
 C00002 ITOUT
 C00000 ITP
 P00103 LC
 P00003 LC
 P00010 LC
 P00017 LC
 C00014 JOUT
 C01153 L0000
 C00012 M0000
 C00002 NC
 C00000 NI
 C00001 NCUT
 C00025 NR001
 C00024 NTP
 C00001 NV
 X00005 CUFFITEM
 X00003 U00000
 X00002 U00000
 X00011 U00000
 X00007 U00000
 C00151 S10E
 X00010 STM.
 X00001 T0000
 C00147 VALUE
 00052 ST0000

00113
 00001
 00042
 00047
 00033
 00005
 00034
 00031
 00114
 00053
 00070
 00002
 00034
 00043
 00074
 00040
 00053
 00073
 00056
 00047
 00004
 00041
 00034
 00000
 00001
 00111
 00105
 00054
 00071
 00045

00075
 00037
 00046
 00110
 00056
 00074
 00104
 00105
 00057
 00050
 00041
 00043
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 00103
 00103
 00032
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 00071
 00076

00072
 00102
 00107

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SUBROUTINE GENOUTPT
  CSUBR      GENOUTPT STAIR
  COMMON/OUTPUTSM/VC1(10,2),VC2(10,2),VC3(2,2),
  INCT1(2),INCT2(2),INCT3(2),A(27,10,2),AM(10,10,2),
  2AT(10,2,2),NODG1(2),NODG2(2),NODG3(2)
  TYPE INTEGER VC1,VC2,VC3
  TYPE INTEGER NODG1,NODG2,NODG3
  COMMON/HCDKLS/HCDK1,HCDK2,HCDK3,HCDK4,HCDK5,HCDK6,HCDK7,
  COMMON/TLSSIZE/MAKCOLM,MAKROWM,MAKCOLM,MAKROWM,MAKCOLM,MAKROWM
  COMMON/TITLE/TITLEM(42),TITLEF(42)
  C*****THE TITLES ARRAYS SHOULD BE DIMENSIONED AS 3*MAKROWM
  TYPE INTEGER TITLEM,TITLEF
  DATA (TITLEM=
    1  BMSUCCESSF,BMUL LAUNCH,BM
    1  BRUNS LAUNCH,BM DEAD B,MADE
    1  BRUNE LAUNCH,BM DELAY L,BAUNCH
    1  BMAITEMPTE,BMD 1ST ME,BMFUEL
    1  BM  ABORT,BM ON ISI ,BMBEFUEL
    1  BM  NO TA,BMNRMS 1S,BMT REFUEL
    1  BMAITEMPTE,BMD REFUEL,BM
    1  BM  REFUEL,BM ABORT,BM
    1  BM  TANK,BMMS NOT A,BMAVAILABLE
    1  BM  RETURN,BM HOME ,BM
    1  BMAORT CU,BMITSIDE EN,BMEMY TERR
    1  BMENTERING,BM ENEMY T,BMENNITICHY
    1  BMKILLS BY,BM AREA A,BMIMMITION
    1  BMKILLS BY,BM LOCAL A,BMTRILLON
    1  BMSM KILL,BMHD BY L,BMICAL ATTH
    1  BMAORT IN,BM ENEMY T,BMENN
    1  BMSCHEDULE,BMD SPLASH,BM
    1  BMDPENETR,BMATE ,BM
    1  BM  RECOVER,BMHER ,BM
    1  BM  HASE ,BMDDEAD ,BM
    1  BM  NO LI,BMVE BASE ,BMON DEPEN
    1  BM  SATUR,BMATED ,BM
    1  BM  KILL',BMD AFTER ,BMRECOVERY
    1  BMRRETURN I,BMC HOME B,BHASE
    1  BM  RECOVER,BMHER ,BM
    1  BM  BASE ,BMDDEAD ,BM
    1  BM  KILLE,BMD AFTER ,BMRECOVERY)
  DATA (TITLEF=
    1  BMAITEMPTE,BMD LAUNCH,BM
    1  BMACT IN C,BMCOMMISSIO,BM
    1  BMDDEAD SIL,BMC
    1  BMACT IN C,BMGM DEAD,BM SILC
    1  BMON DEST,BMSTRUCTIVE ,BMAORTS
    1  BMDSTRUCT,BMIVE ABCH,BMTS
    1  BMDERED ,BM FLIGHT ,BMBFAILURE
    1  BMSUCCESSF,BMUL ,BM
    1  BNUMBER U,BMUSED ,BM
    1  BMDSTRUCT,BMION IN L,BMBAUNCH
    1  BWEAPONS ,BMENTERING,BM AREA
    1  BWEAPONS ,BMENTERING,BM TERM
    1  BNUMBER W,BWEAPONS P,BREN
    1  BNUMBER W,BWEAPONS D,BHEI
  )
  DATA (TITLEF=

```

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PAUL NO.

2

```

1 8MSUCCESSF 8MUL LAUNC 8MH
1 8MUNS LAUN 8M DEAD B 8HASE
3 8MUNS LAUN 8M DELAY L 8MAUNCH
1 8HABORT CU 8MT OF REF 8HFUEL AREA
1 8MENTEM KE 8HFUEL AHE 8HA
1 8HABORT IN 8H REFUEL 8HAREA
1 8MLEAVE KE 8HFUEL AHE 8HA FULL
1 8MLEAVE KE 8HFUEL AHE 8HA EMPTY
1 8HRECOVER 8H
1 8HSATURATE 8HD
1 8HASE DEA 8HD
1 8HMC LIVE 8HASE ON 8HDEPEN
1 8H KILLED A 8HFTER REC 8HVERY
1 8HSCHEMULE 8HD SPLASH 8H
CALL GENPHIN(AVC1,NC1),I1LE5,8C080M,MAXRC8B,MAXCOLB,A)
CALL GENPHIN(AH,VC2,NC12,TITLEM,8CUMSL,MAXRC8M,MAXCOLM,AH)
CALL GENPHIN(AI,VC3,NC13,TITLEI,8CUTNR,MAXRC8I,MAXCOLI,AI)
KETURN
END

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5.4TS GENQUIPT

ED U

12/20/71

GENQUIPT

IDENT

UU034
UU003
U265U
UU005
UU006
U0245

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

GENQUIPT

OUTPUTSM

BCDKLS

TBLSIZE

TITLES

EXTERNAL SYMBOLS

U00DICT.

GENPRIN

5.4TS GENCUPT

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EU

PAGE NO.

4

CG0112 A	00011	00014	
CG1652 AM	00017	00022	
CG2552 AT	00025	00030	
CG0003 RCUASM			
CG0000 BCDBCM	00013		
CG0001 BCMSL	00021		
CG0002 BCUTNK	00027		
CG0004 BCUMHD			
PG0032 BEGIN	00032		
PG0001 DICT	00005	00010	00024
PG0033 ENDING	00036	00031	
PG0000 EXIT	00033		
PG0003 GENCUPT	00003		
PG0002 GENPRIN	00007	00015	00023
PG0032 INITIAL	00006		
CG0003 MAXCCLB	00014		
CG0004 MAXCCLM	00022		
CG0005 MAXCCLT	00030		
CG0000 MAACWB	00013		
CG0001 MAACWM	00021		
CG0002 MAACWT	00027		
CG0104 NCT1	00012		
CG0106 NCT2	00020		
CG0110 NCT3	00026		
CG2642 NC001			
CG2644 NC002			
CG2646 NC003			
X00001 Q84DICT	00000	00004	
CG0121 TITL	00003	00020	
CG0000 TITLES	00003	00012	
CG0173 TITL	00003	00026	
CG0000 VCI	00011		
CG0040 VC2	00017		
CG0100 VC3	00025		

00042 SYMBOLS

```

      SUBROUTINE GERPRIN(A,VC,NCT,TITLE,TITLE1,TITLE2,M,NNA)
      COMMON/ST/FAIL,NAMESIDE(2)
      DIMENSION NA(M,N,2),AIM(N,2),VC(N,2),TITLE(1),NCT(2)
      TYPE INTEGER VC,TITLE,TITLE1
      UC 1 K=1/2
      SUMZU,
      UC 5 I=1,M
      UC 5 J=1,N
      SUM=SUM+A(I,J,K)
      5 NA(I,J,K)=A(I,J,K)
      IF(SUM) 2,1
      2 NCT=NCT(K)
      JUS=1
      NCCOL=SUMMING(MCOL,NCT,NCTK)
      4 CONTINUE
      PRINT 1000,NAMESIDE(K),TITLE1
      1000 FORMAT(1M,120X,1M,2A10,10M DATA )
      PRINT 1201
      1201 FORMAT(1M //)
      PRINT 2000,(VC(J,K),J=J0,NCCOL)
      2000 FORMAT(30A,9(10,2X))
      PRINT 2201
      2201 FORMAT(1M //)
      II=1
      DO 24 I=1,M
      IF(TITLE(II).EQ.1M) 305,304
      304 PRINT 2002,TITLE(II),TITLE(II+1),TITLE(II+2),(NA(I,J,K),J=J0,NCCOL)
      2002 FORMAT(1X,3A8,3X,9(10,2X))
      JUMS)
      II=II+1
      24 CONTINUE
      305 IF(NCT=LE,NCCOL) 1+3
      3 J0=NCCOL-1
      NCCOL=SUMMING(MCOL,NCT,NCTK)
      UC TO 4
      1 CONTINUE
      RETURN
      END

```

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5.4TS GENPRIN

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

GENPRIN

ST

EXTERNAL SYMBOLS

IDENT

UG510
U0052

U0003

GENPRIN

U1010100

THEND.

UBDDICT.

XMINOF

STH.

QNSINGL.

5.415

GENPRIN

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EU

U

PAGE NO.

3

P00004	A	00077	00101	00467	00212	00214	00216	00225				
P00332	BEGIN.	00455	00463	00156								
P00262	CNTRL.	00131	00133	00156	00212	00214	00216	00225				
P00474	CCUNT.	00073	00074									
P00004	CRFMT.	00136	00144	00165	00173	00234	00143	00146	00164	00167	00172	00206
P00001	DICT.	00054	00120	00145	00135	00140						
		00233	00252	00356	00357							
P00475	DK00001.	00075	00315	00356	00333							
P00476	DK00003.	00266	00301	00335								
P00477	DM00001.	00265	00277	00340								
P00456	ENDING.	00055	00260	00353	00354	00354	00355	00355				
P00000	EXIT.	00461										
P00004	FCMMAT.	00175										
P00071	FG00001.	00435	00436									
P00077	FG00002.	00365	00366									
P00101	FG00003.	00367	00370									
P00103	FG00004.	00451	00452									
P00107	FG00005.	00421	00422									
P00114	FG00006.	00377	00400									
P00132	FG00007.	00415	00416									
P00155	FG00010.	00373	00374									
P00201	FG00011.	00403	00404									
P00211	FG00012.	00405	00406									
P00213	FG00013.	00407	00410									
P00215	FG00014.	00411	00412									
P00224	FG00015.	00453	00454									
P00240	FG00016.	00423	00424									
P00332	FG00017.	00425	00426									
P00334	FG00020.	00437	00440									
P00336	FG00021.	00427	00430									
P00337	FG00022.	00441	00442									
P00362	FG00023.	00443	00444									
P00365	FG00024.	00431	00432									
P00350	FG00025.	00445	00446									
P00052	GENPRIN	00052										
P00472	GETPL.	00360	00371	00401	00417	00447						
P00462	GETPU.	00363	00375	00413	00433	00466						
P00136	GG00000.	00123										
P00144	GG00001.	00136										
P00165	GG00002.	00144										
P00173	GG00003.	00165										
P00234	GG00004.	00204										
P00500	I	00063	00105	00175	00236	00310						
P00501	II	00174	00200	00210	00234	00235						
P00263	IN00001.	00074	00223	00265	00300	00303	00313	00315	00327	00347		
P00284	IN00003.	00154	00266	00301	00316	00350	00352					
P00353	INITIAL.	00055										
P00255	.1	00112	00243	00244								
P00113	.2	00112										
P00236	.22											
P00245	.3	00244										
P00204	.304	00203										
P00242	.305	00203										
P00101	.5											

5475 GENPRIN

P00200 #S00005
P00223 #S00000
X00004 #MINJF
00155 SYMBOLS

00241
00231
00117
00251

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EU

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SUBROUTINE GENFILES
  CSUBR      GENFILES  START
  CODECLANE  PARTIAL  SIDE
  COMMON/PROCESS/NI,NV,NC,INITER(100),VALUE(500),DEF(500),LCLCH(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,BLCH
  COMMON/EDITOR/ISITEM
  COMMON/EDITAPE/INTPNCUT,ITSUT(10),JOUT
  EQUIVALENCE(PARTIAL,VALUE(164))
  TYPE REAL PARTIAL
  EQUIVALENCE(SIDE,VALUE(3))
  TYPE INTEGER SIDE
  EQUIVALENCE(EVENT,VALUE(131))
  TYPE INTEGER EVENTIN
  EQUIVALENCE(EVENT,VALUE(130))
  TYPE INTEGER EVENT
  EQUIVALENCE(RCODE,VALUE(139))
  TYPE INTEGER RCODE
  CODECLANE ZONE 1000
  EQUIVALENCE(ZONE,VALUE(28))
  TYPE INTEGER ZONE
  EQUIVALENCE(100,VALUE(140))
  TYPE INTEGER 100
  EQUIVALENCE(CLASS,VALUE(1))
  TYPE INTEGER CLASS
  EQUIVALENCE(MCODE,VALUE(137))
  TYPE INTEGER MCODE
  EQUIVALENCE(TYPE,VALUE(2))
  TYPE INTEGER TYPE
  CODECLANE NPEN 4000
  EQUIVALENCE(NPEN,PRIMETAR,CODE,NDT,NMPS)
  TYPE INTEGER NPEN
  EQUIVALENCE(NPEN,VALUE(162))
  EQUIVALENCE(PRIMETAR,VALUE(148))
  TYPE INTEGER PRIMETAR
  EQUIVALENCE(CODE,VALUE(138))
  TYPE INTEGER CODE
  EQUIVALENCE(NDT,VALUE(163))
  TYPE INTEGER NDT
  EQUIVALENCE(NMPS,VALUE(135))
  TYPE INTEGER NMPS
  CODECLANE NMHUS 5000
  EQUIVALENCE(NMHUS,VALUE(120))
  TYPE INTEGER NMHUS
  DATA(NCALL=1)
  DATA(MARCW=27)
  DATA(MAXROW=14)
  DATA(MAXCOL=14)
  DATA(MAXCOLH=16)
  DATA(MAXCOLT=2)
  COMMON/BLSC/MAKROW,MAXROW,MAXCOL,MAXCOLH,MAXCOLT
  C*****THE COLUMNS ARE THE TYPES,THUS MAXCOLT SHOULD PREFERABLY BE THE
  C MAX NO OF TANKER TYPES,ETC. IF MORE TYPES,IT IGNORES THEM.
  C THESE MAX DIMENSIONS ARE COORDINATED WITH THE VC ARRAYS AND
  C THE ARRAY AT ARRAYS
  COMMON/OUTPUTSM/VC(16*2),VC2(16*2),VC3(2*2)

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1 NCT1(12),NCT2(12),NCT3(12),A(27),B(12),AM(14),B(2),
2 ZAT(14),B(2),NCT1(12),NCT2(12),NCT3(12)
3 TYPE INTEGER VC1,VC2,VC3
4 COMMON/BCURLS/BCURCM,BCUMSL,BCLT,BCDASH,BCUMH
5 TYPE INTEGER BCURCM,BCUMSL,BCUT,BCDASH,BCUMH
6 IF(NCALL)450,451,450
7 450 NCALL=0
8 UC 4 I=1,2
9 NCOS1(I)=0
10 NCOS2(I)=0
11 NCOS3(I)=0
12 NCT1(I)=0
13 NCT2(I)=0
14 NCT3(I)=0
15 CONTINUE
16 UC 1 I=1,MAXCOLB
17 UC 1 I=1,2
18 VC1(I,I)=1H
19 UC 1 I=1,MAXROWB
20 A(I,I,I)=0,0
21 UC 2 I=1,MAXCOLM
22 UC 2 I=1,2
23 VC2(I,I)=1H
24 UC 2 I=1,MAXROWM
25 AM(I,I,I)=0,0
26 CONTINUE
27 UC 3 I=1,MAXCOLT
28 UC 3 I=1,2
29 VC3(I,I)=1H
30 UC 3 I=1,MAXROWT
31 AT(I,I,I)=0,0
32 CONTINUE
33 451 NAME=MPNS
34 NTERM=NDOS
35 CALL SPCIBL
36 IF(SIDE.EQ.3)HRED)9C,91
37 90 K=2
38 UC 10 92
39 91 K=1
40 IF(CLASS.EQ.BCURCM)800,3000
41 C CHECKS WHETHER THIS EVENT DID NOT OCCUR
42 IF(EVENTN)6,81,0,6
43 800 GC TO (6,20),6,0,50,6,70,80,6,6,6,6,130,6,6,160,6,6,190,6,6,EVENT
44 C MEMBER LAUNCH
45 20 GC TO (21,22),23)BCODE
46 21 I=1
47 GC TO 200
48 22 I=2
49 GC TO 200
50 23 I=3
51 GC TO 200
52 C MEMBER REFUEL
53 40 IF(BCODE.EQ.19,CH,BCQUE,10,20,CR,BCQUE,EU,28)61,66
54 41 I=4
55 GC TO 200
56 42 IF(BCQUE=19)66,66,63,66

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44 1=5
   GC TO 200
44 IF(BCODE-20)6.4316
45 1=6
   GC TO 200
46 IF(BCODE-6)4.34.8CCODE.EU.5.34.8CCODE.EU.1)47.402
47 1=7
   GC TO 200
48 IF(BCODE-4)4.00.44.400
   GC TO 200
49 1=8
   GC TO 200
49 IF(BCODE-5)6.4.1.0
401 1=9
   GC TO 200
402 IF(BCODE.EU.2) 304.8CCODE.EU.30) 403.6
403 1=10
   GC TO 200
404 IF(BCODE-29)401.49.401
   C HOMER ENTER ZONE
50 IF(BCODE-0)52.51.52
51 1=11
   GC TO 200
52 IF(BCODE-7)6.53.6
53 1=12
   GC TO 200
   C HOMER AREA ATT=11
70 IF(BCODE-8)6.71.6
71 1=13
   GC TO 200
   C HOMER LOCAL ATTRIT
80 IF(BCODE.EG.9) 304.8CCODE.EU.10) 01.82
81 1=14
   GC TO 200
82 IF(BCODE-1)76.83.6
83 1=15
   GC TO 200
   C AREA
130 IF(BCODE-12)123.131.133
131 IF(BCODE)132.134.132
134 1=16
   GC TO 200
132 IF(BCODE-2)75.6.135
135 1=17
   GC TO 200
133 IF(BCODE-1)16.130.6
136 1=17
   GC TO 200
   C RECOVERY
160 IF(BCODE-1)162.161.162
141 1=19
   GC TO 200
162 IF(BCODE-17)164.163.164
163 1=20
   GC TO 200
164 IF(BCODE-2)166.165.166
165 1=21

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317 I=13
  PARRIVE=MPEN
  GC TC 300
318 I=14
  PARRIVE=MDCT
  GC TC 300
500 IF (CLASS.EQ.HCDVNM) 501.6
501 GC TC (6,502.6,6.6,6.6,6.6,6.6,506.509,509,6.6,510.6,5,522.6),EVENT
C LAUNCH
502 GC TC (503,503,503,6)HCODE
503 I=HCODE
  GC TC 600
C ABCRT
504 IF (HCODE-14) 705,505,7.5
705 IF (HCODE-18) 6,706,6
706 I=14
  GC TC 600
505 I=14
  GC TC 600
506 IF (HCODE-1) 6,507.6
507 I=5
  GC TC 600
509 IF (HCODE-1) 511,511,511
510 I=4
  GC TC 600
511 IF (HCODE-12) 513,513,513
512 I=6
  GC TC 600
513 IF (HCODE-13) 6,514.6
514 I=7
  GC TC 600
C RECOVERY
516 IF (HCODE-1) 518,517,518
517 I=4
  GC TC 600
518 IF (HCODE-22) 521,521,520
519 I=10
  GC TC 600
520 IF (HCODE-17) 525,521,525
521 I=11
  GC TC 600
525 IF (HCODE-21) 6,520.6
526 I=12
  GC TC 600
522 IF (HCODE-23) 6,523.6
523 I=13
  GC TC 600
600 CALL ADDIN (VC3,A1,ACT3(K),HCODE3(K),K,1,MAXRCST,MAXCOLT)
  RETURN
END

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S.ATS GENTBLES

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

GENTBLES
PROCESS
EDITERM
EDITAPE
TALSIZC
OUTPUTSM
RCUKLS

EXTERNAL SYMBOLS
WRQDUICL.
SPCTBL
ADUIN

IUENT

GENTBLES

V1251
UUUIC
V1173
UUUUI
UUUI5
UUU06
U265U
UU005

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5.4.15 GENTILES

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5-15 VENTILES

CU000U INIP
CU000U IS-ITEM
CU0002 ITQ01

CU0053 .1
CU0374 .131
CU0377 .131
CU0406 .132
CU0415 .133
CU0402 .134
CU0411 .135
CU0420 .136
CU0424 .137
CU0407 .138
CU0412 .139
CU0476 .140
CU0427 .141
CU0433 .142
CU0435 .143
CU0442 .144
CU0445 .145
CU0451 .146
CU0454 .147
CU0460 .148
CU0463 .149
CU0465 .150
CU0468 .151
CU0471 .152
CU0474 .153
CU0477 .154
CU0480 .155
CU0483 .156
CU0486 .157
CU0489 .158
CU0492 .159
CU0495 .160
CU0498 .161
CU0501 .162
CU0504 .163
CU0507 .164
CU0510 .165
CU0513 .166
CU0516 .167
CU0519 .168
CU0522 .169
CU0525 .170
CU0528 .171
CU0531 .172
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CU0561 .182
CU0564 .183
CU0567 .184
CU0570 .185
CU0573 .186
CU0576 .187
CU0579 .188
CU0582 .189
CU0585 .190
CU0588 .191
CU0591 .192
CU0594 .193
CU0597 .194
CU0600 .195
CU0603 .196
CU0606 .197
CU0609 .198
CU0612 .199
CU0615 .200
CU0618 .201
CU0621 .202
CU0624 .203
CU0627 .204
CU0630 .205
CU0633 .206
CU0636 .207
CU0639 .208
CU0642 .209
CU0645 .210
CU0648 .211
CU0651 .212
CU0654 .213
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00001
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00100

5.4TS IN/ENC

PROGRAM LENGTH INZENG
ENTRY POINTS
EXTERNAL SYMBOLS
0800101.

IDENT
00112
00015

INZENG

12/20/71

EU

J

PAGE NO.

2


```

SUBROUTINE MATINITA
  CSUB= MATINIT STMT
  COMMON/MSICUT/MSIUE,NINBASE,NINUV,NINJAN,NIN#(1P,HTIME,NUE,NIN#
  * NPLAC,NITYPE,NICLASS,NINIEG,NINLENT,NINAL,NCCODE,NINHHUS,NINJAP,
  * NITER,NAREA,
  * MSICUT(200)
  EQUIVALENCE(NITAM,NPEN),(NHHUS,NNUCT)
  EQUIVALENCE (MSIUE,NMIS(CUT(1)),NINIS(CUT,HIST(CUT))
  CUECLANE INDEKNO INUV INITAM #MUTYPE CODE
  COMMON/PROCESS/N1,NV,NC,INITEM(100),VALUE(500),DEF(500),LOGC(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,LOLDO
  COMMON/EDITIME/ISITEM
  EQUIVALENCE (INDEKNO,INUV)
  EQUIVALENCE (INDEKNO,VALUE( 22))
  TYPE INTEGER INDEKNO,VALUE( 128))
  EQUIVALENCE (INUV,VALUE( 129))
  TYPE INTEGER INUV,VALUE( 129))
  TYPE INTEGER INJAN,VALUE( 58))
  EQUIVALENCE(#MUTYPE,VALUE( 58))
  TYPE INTEGER #MUTYPE,VALUE( 138))
  EQUIVALENCE(CODE,VALUE( 138))
  TYPE INTEGER CODE
  CUECLANE EVENT NAL ITAM MEMOS NPEN
  EQUIVALENCE (EVENT,VALUE( 130))
  TYPE INTEGER EVENT,VALUE( 139))
  EQUIVALENCE (NAL,VALUE( 140))
  TYPE INTEGER NAL,VALUE( 140))
  EQUIVALENCE (ITAM,VALUE( 141))
  TYPE INTEGER ITAM,VALUE( 141))
  EQUIVALENCE (MEMOS,VALUE( 142))
  TYPE INTEGER MEMOS,VALUE( 142))
  EQUIVALENCE (NPEN,VALUE( 142))
  TYPE INTEGER NPEN,VALUE( 142))
  CUECLANE PLACE 1000 NDET
  EQUIVALENCE (PLACE,VALUE( 132))
  TYPE INTEGER PLACE,VALUE( 140))
  EQUIVALENCE (1000,VALUE( 140))
  TYPE INTEGER 1000,VALUE( 143))
  EQUIVALENCE (NDET,VALUE( 143))
  TYPE INTEGER NDET,VALUE( 135))
  CUECLANE NMPNS NHHUS
  EQUIVALENCE (NMPNS,VALUE( 135))
  TYPE INTEGER NMPNS,VALUE( 120))
  EQUIVALENCE (NHHUS,VALUE( 120))
  TYPE INTEGER NHHUS,VALUE( 120))
  CHANGE NMPNS
  NDE 135
  CALL CHANGE
  NMPNS=NAREA
  CHANGE NMPNS
  NDE 120
  CALL CHANGE
  NHHUS=VITEM
  CHANGE INJEKNO

```


FIN5.5

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PAID NC

2

NC= 22
CALL CHANGE
INURANCEINPHASE
CHANGE INDY

17000
18000

NC= 128
CALL CHANGE
INURANCEINDY
CHANGE INTAN

19000
20000

NC= 129
CALL CHANGE
INTANININTAN
CHANGE BHOITE

21000
22000

NC= 52
CALL CHANGE
BHOITEENK=TP
CHANGE NAL

23000
24000

NC= 129
CALL CHANGE
NAL=ANAL
IF (EVENT=9) 10,20,10

25000
26000

C HERE FOR AREA ATTENTION
10 CONTINUE

CHANGE :AIM

NC= 160
CALL CHANGE
:AIM=NTAIN
CHANGE PLACE

27000
28000

NC= 132
CALL CHANGE
PLACE=PLACE
CHANGE MEMOS

29000
30000

NC= 101
CALL CHANGE
MEMOS=MEMOS
CHANGE COUR

31000
32000

NC= 132
CALL CHANGE
COUR=ENCLO
NC TO 30

33000
34000

C HERE FOR TERMINAL ATTENTION
20 CONTINUE

CHANGE AREA

NC= 152
CALL CHANGE
AREA=AREA
CHANGE BOST

35000
36000

NC= 103
CALL CHANGE
BOST=NDCT

30 CONTINUE
CALL AREA
MEMOS
END

37000
38000

39000
40000

41000
42000

43000
44000

45000
46000

47000
48000

SPTS MATRITA

PROGRAM LENGTH
ENTRY PCINTS
BLOCK NAMES

MATRITA

HISTOUT
PROCESS
EDITERM
EDITAPE

EXTERNAL SYMBOLS

OBODUCT.
CHANGE
ADDATA

IDENT

00123

00003

00310

01173

00001

00015

MATRITA

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5.4TS MATRITIX

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XC0003 ADUATA	00116								
P00121 BEGIN.	00121								
X00002 CHANGE	00011								00076
	00105								
	00101								
C00360 CODE									
C01133 DEF	00005								
P00001 DICT.	00077								
	00006								
P00122 ENDING.	00053								
C00350 EVENT	00122								
P00000 EXIT.									
C00300 HISTOUT									
C00005 HIME									
C00362 IDUO									
C00174 INDEANC									
C00346 INDV									
C00003 INITCM									
P00121 INITIAL.									
C00347 INIAR									
C00000 INIP									
C00000 IS-TCRM									
C00002 ITOUT									
P00055 .10									
P00103 .20									
P00116 .30									
C00014 JCUT									
C01153 LGLCB									
P00003 MATRITIX									
C00407 MAMDS									
C00405 MAM									
C00021 MAREA									
C00002 NC									
C00015 ACODE									
C00411 ADET									
C00006 NEVENT									
C00000 NI									
C00013 NIALERT									
C00011 NICLASS									
C00001 NIMBASE									
C00002 NINDV									
C00003 NINTAR									
C00012 NIREG									
C00010 NITYPE									
C00016 NNHDS									
C00014 NNAL									
C00016 NNDET									
C00017 NNPEN									
C00004 NNWTP									
C00001 NCUT									
C00410 NPEN									
C00007 NPLACE									
C00000 NSIDE									

5.4TS MATRIIX

CU0017	NTAIM	00001	00001
CU0020	NTERM	00000	00000
CU0001	NV	00021	00021
CU0336	NRPDS	00014	00014
CU0355	NRPNS	00067	00067
CU0352	PLACE	00000	00004
XU0001	UNODICT.	00000	00002
CU0406	TAIM	00045	00045
CU0147	VALUE	00075	00075
CU0240	PHUTYPE		
	SYMBOLS		

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FTAS.5

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CALL PESTICHE
 RETURN
 YOU CONTINUE
 CHANGE NAPS
 NC= 135
 CALL CHANGE
 NAPS=NAPS
 CHANGE INUEXAG
 NC= 22
 CALL CHANGE
 INUEXAG=INUEXAG
 CHANGE INUY
 NC= 128
 CALL CHANGE
 INUEXAG=INUEXAG
 CHANGE INYAN
 NC= 129
 CALL CHANGE
 INUEXAG=INUEXAG
 CALL AUDATA
 RETURN
 END

25000
 25000
 27000
 28000
 29000
 30000
 31000
 32000
 33000
 34000
 35000
 36000
 37000
 38000

5-ITS MLANX 12/20/71 ED PAGE NO. 3

MLANX

IDENT

00120
00003
00310
01173
00001
00015

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

MLANX

MISTOUT
PROCESS
EDITMM
EDITAPE

EXTERNAL SYMBOLS

00001CT.
CHANGE
ADDRP
RESTORE
AUCATA

S

PAGE NO.

J

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54TS MLANX

CC016	NTXLC	00053	00053
CC0001	NV	00046	00046
CC0030	NPPLIST	00072	00072
CC0355	NPNS	00060	00060
AL0001	NPNDICT	00062	00062
AL0004	NPSTORE	00026	00026
PL0000	TSUQUOI	00014	00014
CC0147	VALUE	00051	00051
CC0240	MDTYPE	00061	00061
PU0027	PSUQUOI		
	00076 SYMCL		

00100

00103


```

TYPE REAL YIELD *VALUE( 61))
EQUIVALENCE(FFRAC
TYPE REAL FFRAC
EQUIVALENCE(PDUU
TYPE REAL PDUU
CUECLAME CEP JTYPE INDEANG FUNCTION CNIRYLC
EQUIVALENCE(CEP *VALUE( 61))
TYPE REAL CEP
EQUIVALENCE(JTYPE *VALUE( 57))
TYPE INTEGER JTYPE
EQUIVALENCE(INDEANG *VALUE( 22))
TYPE INTEGER INDEANG
EQUIVALENCE(FUNCTION *VALUE( 6))
TYPE INTEGER FUNCTION
EQUIVALENCE(CNIRYLC *VALUE( 5))
TYPE INTEGER CNIRYLC
CUECLAME ISITE ASMTYPE CNIRYOWN
EQUIVALENCE(ISITE *VALUE( 114))
TYPE INTEGER ISITE
EQUIVALENCE(ASMTYPE *VALUE( 59))
TYPE INTEGER ASMTYPE
EQUIVALENCE(CNIRYOWN *VALUE( 4))
TYPE INTEGER CNIRYOWN
CUECLAME LAT LONG
EQUIVALENCE(LAT *VALUE( 30))
TYPE REAL LAT
EQUIVALENCE(LONG *VALUE( 31))
TYPE REAL LONG
CUECLAME IREG
EQUIVALENCE(IREG *VALUE( 51))
TYPE INTEGER IREG
CUECLAME ICLASS
EQUIVALENCE(ICLASS *VALUE( 49))
TYPE INTEGER ICLASS
DATA(ILSHF=1000000)
INITIALIZE
IPRDES=0
ALONG=KEYMAKE(2*0+24)
ALAT=KEYMAKE(1*2+124)
KEYCAN=KEYMAKE(2*0+8)
KEYLOC=KEYMAKE(2*8+8)
KEYFUN=KEYMAKE(2*17+8)
KEYRCG=KEYMAKE(2*2+8)
KEYLAT=KEYMAKE(2*32+10)
KEYDES=KEYMAKE(2*0+30)
KEYTSK=KEYMAKE(2*31+12)
IDTYPE=IDAPE(3)
KE=IND IDTYPE
ILAT=0
IKAT=0
IFCN=0
IREG=0
IKLAT=0
IKNIRY=0
IFCN=0
IREG=0

```

```

C      I1=MAX(NINTY+MXFCN,MAXREGONAL)+4
      DEBUO PRINT
      PRINT 5151,MAXLSC,MAXNINTY,MXFCN,MAXREGONAL,1,11
      UC 6900 I=1,MAXLSC
6900  NDACIT(I)=0
      UC 6901 I=1,11
6901  KNTRY(I)=0
      C READ IN BREAKPOINT TABLES
      5151 FORMAT(1A,61D)
      C NAME FOR INDEXUB (2ND FILE AFTER LABEL)
      ITP=ITAPE(1)
      C POSITION TO BREAKPOINT TABLE
      CALL SETHEAD
      CALL SKIPFILE(ITP)
      71 HUFFER IN (ITP,1) (CUMNO(1),TYPENAME(250))
      72 IF(UH(1,ITP) 72,73,7372,7372
      7372 PRINT 7373,ITP
      7373 FORMAT (45H ERROR IN READING BREAKPOINT TABLE FROM LTN ,12)
      CALL AHCMT
      73 CONTINUE
      C READ DIRECTORY AND COPY OUT
      CALL TERMTAPE
      NOUT=NOUT
      ITCU(1)=1,4E(5)
      ITCU(2)=ITAPE(6)
      MYIDENT=MDATA*0.07
      CALL INITEDIT(ITAPE(1))
      C SET NOUT 0-8; MAXULEN WILL NOT TERM. OUTPUT
      NOUT = 0
      C READ FIRST ITEM
      CALL INPITEM
      UC 100 ICL=1,MAXMHU
      YIELDX(ICL)=0.0
      FFRACK(ICL)=0.0
      PDDAT(1,ICL)=0.0
      100 CONTINUE
      C FILL CLASS TABLES
      61 IF(ICLASS)0.0,0.0,0.1
      61 IF(ICLASS=MAXKLS)0.2,0.2,0.0
      62 KLASSES(ICLASS)=CLASS
      MCD8CM=KLASSES(MDXMCM)
      MCDTNK=KLASSES(MDATNK)
      MCDMSL=KLASSES(MDAMSL)
      IF(1SITE=1)1,1,0.0
      80 IF(1SITE=1)1,1,0.0
      1 IF(CLASS=EQ,BCD=MD)2,10
      2 YIELDX(MDTYPE)=YIELD
      FFRACK(MDTYPE)=FFRAC
      PDDAT(MDTYPE)=PDDO
      GC 10 50
      10 IF(CLASS=EQ,BCD=MD)11,20
      11 CEPA(ASMTYPE)=CEP
      IWDAT(ASMTYPE)=MDTYPE
      GC 10 50
      20 IF(CLASS=EQ,BCD=MD)21,30
      21 CEPB(JTYPE)=CEP
      GC 10 40

```

```

30  IF(CLASS.EQ.BCUMSL)32*40
C 32  CEPR(JTYPE)=CEP
    FILL FILES FOR COUNTRY,CONTINENT,FUNCTION
40  IF(INDEXING)50*50*41
    IF(INDEXING-MAXLOC)60*60*60*60*41
50*1  PRINT 60*2,INDEXING-MAXLOC
60*2  FORMAT(33HITEM IN DATA BASE HAS INDEXING OF 112*2H,HEADSUM USES N
    1CT ACCEPT ANY GREATER THAN 112)
60*0  CONTINUE
C  CLEAR DECIMALS AND FIX
    JLONG=LONG*10000.
    JLAT=LAT*10000.
C  PACK
    NDESIG=DESIG/1LSHT
    NDESK(1)=NDESIG*400. 7777777777
    NTSKM=TSKM*AND. 7777777777777777
    NDESK(1)=NTSKM*CR. NDESK(1)
    WRITE(10,TYPE) INDESK,NDESK(1)
    IPADES=IPADES+1
9000  IF(IPADES*6T.100) 9001*9000
9002  PRINT 9002,INDEXING,NDESK(1)
9001  CONTINUE
    CALL IPUT(KLONG+1,JLONG,LATLONG(1))
    CALL IPUT(KLAT+1,JLAT,LATLONG(1))
    JLAT=1
6004  IF(JLAT-JLAT)6000*6000*6001
6000  IF(KLATPK(JLAT)-LATLONG(1))6002*6003*6002
6002  JLAT=JLAT+1
6005  IF(JLAT-MLAT)6004*6004*6005
    1XLAT=1XLAT+1
    GO TO 6003
6001  KLATPK(JLAT)=LATLONG(1)
    1LAT=JLAT
    JREG=1
6003  IF(JREG-JREG)6010*6010*6011
6010  IF(KREG(JREG)-JREG)6012*6013*6012
6012  JREG=JREG+1
6015  IF(JREG-MAXREG)6014*6014*6015
    1XREG=1XREG+1
    GO TO 6013
6011  KREG(JREG)=JREG
    JFCN=1
6013  IF(JFCN-JFCN)6020*6020*6021
6020  IF(KFCN(JFCN)-FUNCTION)6022*6023*6022
6022  JFCN=JFCN+1
6025  IF(JFCN-MAXFCN)6024*6024*6025
    1XFCN=1XFCN+1
    GO TO 6023
6021  KFCN(JFCN)=FUNCTION
6023  KNTNY=CNTRYCN
    1K=1
6026  JKNTRY=1
6034  IF(JKNTRY-JKNTRY)6030*6030*6031

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107320
107330
107340
107350
107360
107370
107380
107390
107400
107410
107420
107430
107440
107450
107460
107470
108400
109400
110000
111000
112000
113000
114000
115000
116000
117000
118000
119000
120000

5.ATS MCREDITA

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IDENT MCREDITA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

MCREDITA

TAPES 00011
ITP 00070
MYIDENT 00026
TWRD 00001
BYTYPE 00001
BCDKLS 00005
WARHEAD 00026
MAXES 00010
KEYS 00011
1 27340
2 20514
3 00001
ASM 00050
BOMBER 00050
MISSILE 00050
PROCESS 00050
EDITERM 00001
EDITAPE 00015

EXTERNAL SYMBOLS

THEND.
000100
000010
KEYMAKE
SETREAD
SKIPFILE
ARGRT
TEMTAPE
INITEDIT
INPTER
IPUT
NEXTITEM
NEWUNIT
000100
EFT.
REM.
HFI.
STM.
STB.
JNSINGL.

5.4TS ACHE DATA

7

PAWE NC.

CU

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XU0007 ARSRT 00205
 CU0241 ASMTYPE 00300
 CU0003 ACUASM 00006
 CU0009 BCUSCM 00303
 CU0001 MCDMSL 00344
 CU0002 MCDTNR 00341
 CU0004 MCDJHO 00351
 PU0735 MEGLM 00737
 KU0021 MFLA 00245
 CU0017 BITPES 00305
 CU0267 CEP 00366
 CU0009 CEPA 00376
 CU0000 CEPB 00404
 CU0000 CEPK 00331
 CU0017 CLAS 00641
 CU0153 CNTRYLOC 00507
 CU0152 CNTRYCMT 00203
 PU0734 CNTRFL 00473
 PU0760 CUMT 00234
 PU0012 CRPAT 00247
 CU0000 CUANC 00435
 CU0133 CUF 00712
 CU0171 DESL 00175
 PU0001 ULCT 00307
 CU0110 00601
 CU0173 00710
 CU0073 00732
 CU0742 00742
 CU0263 FFRAC 00355
 CU0002 FFRAGA 00340
 CU0112 FFRMAT 00277
 CU0154 FUNCTICA 00371
 PU0213 GGUUGU 00173
 PU0205 GGUUGU 00255
 PU0425 GGUUGU 00413
 PU0461 GGUUGU 00450
 PU0500 GGUUGU 00400
 PU0732 GGUUGU 00722
 PU0761 1 00214
 PU0762 ICL 00311
 CU0227 ICLAS 00323
 PU0763 IDIBE 00134
 PU0764 IFCN 00101
 PU0765 IGTC 00637
 PU0766 II 00172
 PU0767 IIEG 00182
 PU0770 IK 00011
 PU0771 IKNTMY 00100
 PU0772 ILAT 00157
 PU0011 ILSMT 00437
 CU0355 INUPEG

00303
 00373
 00401
 00341
 00351

00403

00400

00456

00420

00422

00451

00451

00451

00451

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00451

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SATS -CHREDATA

P00221 #S00001 00223

P00241 #S00002 00223

P00310 #S00003 00322

P00257 FIELD 00353

P00000 FIELD 00316

00326 SYMBOLS

00317 00354 00355

697

5.4TS HEADATA

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HEADATA

STIME
KNTWRT
CMCD
DCARZ
APSTZ

EXTERNAL SYMBOLS

TREND.
AGGREGICT.
TSM.
STH.
SLC.
SLI.
UNSSINCL.

IIDENT

00305
00140
00005
00002
00040
00004
00022

HEADATA

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770

5415 HEADATA

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LU

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U

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U

P00350	BEIN.	00350	00153	00154	00155	00174	00175	00176	00200	00235
P00357	ENRTL.	00357	00276	00307	00316	00320	00351	00352	00177	00235
C00000	COMCO	00212	00224	00227	00261	00300	00306	00324	00325	00217
P00003	CH-MT.	00161	00167	00153	00166	00171	00202	00205	00214	00217
P00001	WCT.	00142	00146	00231	00246	00260	00263	00266	00273	00314
P00351	ENDING.	00223	00226	00243	00246	00260	00263	00266	00273	00314
P00370	EXIT.	00323	00346	00354	00355	00355	00355	00355	00355	00355
P00003	FORMAL.	00361	00361	00361	00361	00361	00361	00361	00361	00361
P00151	GGG0000.	00310	00310	00310	00310	00310	00310	00310	00310	00310
P00137	GGG0001.	00161	00161	00161	00161	00161	00161	00161	00161	00161
P00203	GGG0002.	00167	00167	00167	00167	00167	00167	00167	00167	00167
P00215	GGG0003.	00203	00203	00203	00203	00203	00203	00203	00203	00203
P00227	GGG0004.	00215	00215	00215	00215	00215	00215	00215	00215	00215
P00244	GGG0005.	00227	00227	00227	00227	00227	00227	00227	00227	00227
P00251	GGG0006.	00244	00244	00244	00244	00244	00244	00244	00244	00244
P00257	GGG0007.	00261	00261	00261	00261	00261	00261	00261	00261	00261
P00304	GGG0010.	00271	00271	00271	00271	00271	00271	00271	00271	00271
P00324	GGG0011.	00312	00312	00312	00312	00312	00312	00312	00312	00312
P00355	GGG0012.	00344	00344	00344	00344	00344	00344	00344	00344	00344
P00352	I	00234	00234	00234	00234	00234	00234	00234	00234	00234
P00350	INITIAL.	00143	00143	00143	00143	00143	00143	00143	00143	00143
P00354	.10	00326	00326	00326	00326	00326	00326	00326	00326	00326
P00341	.4	00326	00326	00326	00326	00326	00326	00326	00326	00326
P00327	.5	00326	00326	00326	00326	00326	00326	00326	00326	00326
P00335	.8	00334	00334	00334	00334	00334	00334	00334	00334	00334
P00344	.9	00333	00333	00333	00333	00333	00333	00333	00333	00333
P00111	.100000	00310	00310	00310	00310	00310	00310	00310	00310	00310
P00125	.10	00347	00347	00347	00347	00347	00347	00347	00347	00347
P00033	.11	00147	00147	00147	00147	00147	00147	00147	00147	00147
P00120	.100001	00325	00325	00325	00325	00325	00325	00325	00325	00325
P00121	.100002	00327	00327	00327	00327	00327	00327	00327	00327	00327
P00122	.100003	00333	00333	00333	00333	00333	00333	00333	00333	00333
P00123	.100004	00335	00335	00335	00335	00335	00335	00335	00335	00335
P00124	.100005	00341	00341	00341	00341	00341	00341	00341	00341	00341
P00055	.15	00232	00232	00232	00232	00232	00232	00232	00232	00232
P00053	.1	00274	00274	00274	00274	00274	00274	00274	00274	00274
P00072	.16	00264	00264	00264	00264	00264	00264	00264	00264	00264
P00054	.2	00220	00220	00220	00220	00220	00220	00220	00220	00220
P00112	.3	00315	00315	00315	00315	00315	00315	00315	00315	00315
P00007	.6	00164	00164	00164	00164	00164	00164	00164	00164	00164
P00031	.7	00266	00266	00266	00266	00266	00266	00266	00266	00266
C00000	JDAY	00151	00151	00151	00151	00151	00151	00151	00151	00151
C00003	JMC04	00155	00155	00155	00155	00155	00155	00155	00155	00155
C00004	JMIN	00156	00156	00156	00156	00156	00156	00156	00156	00156
C00001	JMON	00153	00153	00153	00153	00153	00153	00153	00153	00153
C00002	JTEAH	00154	00154	00154	00154	00154	00154	00154	00154	00154
C00000	NDCAGZ	00317	00317	00317	00317	00317	00317	00317	00317	00317
C00002	NDSW	00331	00331	00331	00331	00331	00331	00331	00331	00331
C00001	NCRITA	00321	00321	00321	00321	00321	00321	00321	00321	00321
C00000	NCRITD	00332	00332	00332	00332	00332	00332	00332	00332	00332
C00001	NPMAGZ	00321	00321	00321	00321	00321	00321	00321	00321	00321

5.4TS	REAUATA	12/10/71	EU	U	PAGE NO.	4
CC0003	NP5*	00337				
PC0363	NP1	00330				
PC0304	NP2	00311				
CC0000	NP5YS	00237	00300	00301		
X00002	G840ICT.	00254	00277			
X00007	QNSHGL.	00141				
PC0140	REAUATA					
X00009	SL1.	00170				
X00005	SL2.	00216				
X00004	SL3.	00201	00345			
X00001	THEND.	00204	00245	00257	00302	00353
X00003	ISM.	00145	00313			
PC0235	#SUCU01.	00262				
PC0252	#SU0002.	00213				
PC0271	#SU0003.	00245				
	00102 SYMBCL3					


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SUBROUTINE HEADOUT
CSUBM      HEADOUT    270CT/I     *****
COMMON/RTYPE/CURNO(15)*RTYPE(15)+INDCLAS(15)+INDEXGT(250)+
I          TYPENAME(250)+CLASSES(250)
CUSE       INTEGER TYPENAME,CURNO+DTYPES
COMMON/KNT/KNT/NCONTU,NCKAIA
CEND       KNT=*****
COMMON/TAPES/ITAPE(110),MAXITAPE(110),NINP,NNGOUT
COMMON/ITP/ITP
COMMON/TWCRD/ITWCRO
COMMON/ST/FAIL,NAME$IDE(2)
DATA(FAIL=SHGREEN),(NAME$IDE=NAME$,NAME$O=NAME$O)
COMMON/ISTG/ISTG,RIBASE,MNUV,NINITAM,NNTTYP,HTIME,EVENT,
+PLACE,ALITYPE,NICLASS,NLINE,NVALERI,NWOOD,
NHISICUT(250)
EQUIVALENCE (NSTDE,NHISICUT(1)),(NMHISICUT,NHISICUT)
DATA(NSKIP=5)
CUECLARE I SIZE TIME EVENT IMEG
COMMON/PROCESS/WL,NV,NVC,NINTCH(100),VALUE(500)+DEF(500)+LOLCOT(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEF,WL,NVC
COMMON/EDITERM/IS,ITEMM
COMMON/EDITAPE/IMP,NNGOUT,ITGOUT(110),JGOUT
EQUIVALENCE(SIZE ,VALUE( 3))
TYPE INTEGER SIDE ,VALUE( 124))
EQUIVALENCE(TIME ,VALUE( 130))
TYPE REAL TIME ,VALUE( 130))
EQUIVALENCE(EVENT ,VALUE( 130))
TYPE INTEGER EVENT ,VALUE( 511))
EQUIVALENCE(IMEG ,VALUE( 511))
TYPE INTEGER IMEG
CUECLARE IALLENT
EQUIVALENCE(IALLENT ,VALUE( 126))
TYPE INTEGER IALLENT
CUECLARE TYPE CLASS ,VALUE( 21))
EQUIVALENCE(ITYPE ,VALUE( 21))
TYPE INTEGER TYPE
EQUIVALENCE(ICLASS ,VALUE( 1))
TYPE INTEGER CLASS
CUECLARE PARRIVE
EQUIVALENCE(PARRIVE ,VALUE( 104))
TYPE REAL PARRIVE
CUECLARE ICCLASS
EQUIVALENCE(ICCLASS ,VALUE( 49))
TYPE INTEGER ICCLASS
CUECLARE ITYPE
EQUIVALENCE(ITYPE ,VALUE( 50))
TYPE INTEGER ITYPE
IOO TIME=ITAPE(4)
CALL RUMORU
IF((ITWCRO.EQ.NLAST).AND.(
IF((ITWCRO.EQ.O).AND.(ITWCRO.LE.COO))GO TO 20
PRINT 22,ITWCRO,NCONTU
FORMATT('CONTINUE')PRINT 110,ISH NO,DO WHITES = 110)
PRINT 24,(NHISICUT(1),1,1,200)

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FIN5.5

CALL PRITEH
GC TC 100
1 CALL MLANK
GC TC 100
2 CALL BOMBANDT
GC TC 100
3 CALL CLANK
GC TC 100
9 CALL MATTHITA
GC TC 100
10 CALL BUANK
GC TC 100
300 CALL TERMIAPE
CALL NEWUNIT(IIP)
RETURN
END

12/20/11

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3

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5.415 HEADOUT

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ED

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4

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

HEADOUT
MYTYPE
KATWNT
TAPES
ITP
TWCRU
SI
HISTCUT
PROCESS
EDITERM
EDITAPE

IOENT

HEADOUT

00344
00042
01433
00002
00026
00001
00001
00003
00310
01773
00001
00015

EXTERNAL SYMBOLS

THEND.
ORDDICT.
KOWCKU
KOBARRY
ARCHT
CHANGE
DLITEM
CLAUX
BOMBANDJ
CLAUNA
MATTITX
HOMAX
TERMTAPE
NEWUNIT
STM.
UNSLINGL.

5.4.15 HEADOUT

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AC0005	AC0005	00132							
AC0014	HDAMA	00131							
AC0032	HEFIA	00133							
AC0011	ROMANOUT	00136							
AC0017	HTYPES		00135	00170	00175	00202	00222	00221	00235
AC0004	CHANGE		00130						
AC0147	CLASS		00241						
AC0012	CL IDIA		00112	00273	00275				
AC0031	CHARTI.		00105						
AC0004	CHARTI.		00112						
AC0000	CUMC		00215						
AC0133	DEF								
AC0001	DICT.		00051	00074	00114	00113	00117	00131	00137
			00151	00164	00171	00203	00223	00230	00270
			00277	00304	00315	00320	00323	00325	
			00045	00342					
AC0034	ENDING.		00173						
AC0030	EVENT								
AC0000	EXIT.		00335						
AC0004	FORMAT.		00152						
AC0075	GOO0000.		00003						
AC0012	GOO0001.		00075						
AC0012	GOO0002.		00115						
AC0030	GOO0003.		00266						
AC0000	HISTORI								
AC0005	HTIME		00105						
AC0034	I		00102	00122	00123	00126			
AC0034	IALERT		00205						
AC0027	ICLASS		00146						
AC0060	IFU0001.		00050						
AC0034	IGTIC.		00244						
AC0055	INDREG								
AC0036	INOCCLAS								
AC0003	INITEM								
AC0032	INITIAL.								
AC0000	INIP								
AC0031	INEG		00200						
AC0000	IS+ITEM		00046						
AC0000	ITAPE								
AC0002	ITCUT								
AC0000	ITP		00047						
AC0000	ITQMB		00052						
			00272						
AC0034	ITP		00212						
AC0030	ITYPE		00225						
AC0046	100		00135						
AC0030	11		00246						
AC0031	10		00155						
AC0055	20		00054						
AC0036	2		00247						
			00262						
			00077						
AC0063	21		00251	00252	00253	00256	00257	00260	00261
			00264	00265					
AC0075	23		00250						
AC0134	26		00063						
AC0136	29		00062						
			00001						
			00135						

5.415 HEADOUT

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5.415 HEADOUT

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7

00001 TIME
000342 TIME
000150 TYPE
000447 TYPE NAME
000147 VALUE
000103 #SUBOUT.
000123 #SUBOUT.
00156 SYMBOLS

00073
00106
00233
00232
00107
00127

00110
00166
00233
00232

00130

00270

082

FTN5.5

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2

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1103      HEAD 1103,(NAME$U(I,2),I=1,NUMREG)
      FORMAT(8(A8,2X))
      IREAD=0
      HEAD 1102,CGROUPS
      IF(CGROUPS) 5100,5100,5101
5101      IF(CGROUPS=MAXGRP) 5105,5105,5102
5102      PRINT 5103,CGROUPS,MAXGRP
5103      FORMAT(1X,11H CGROUPS OF,110,23H GREATER THAN MAXGRP OF,110)
      CALL ANCHT
      RETURN
5105      UC 5108 K=1,2
      UC 5107 I=1,CGROUPS
      READ 5106,NAME$P(I,K),NUM$P(I,K)
5106      FORMAT(AB,2X,110)
      $GPS=NUM$P(I,K)
      HEAD 1103,(CQUES(J,I,K),J=1,$GPS)
5107      CONTINUE
5108      CONTINUE
      KK=MAX1M*(MAXREG+2)*2
      UC 5106 I=1,KK
      NA0Z(I)=0
      YDEL(I)=0.0
      CLEA ARRAYS FOR CNTRY GROUP
      KK=MAX1M*(MAXGRP+2)*2
      UC 5109 I=1,KK
      NA0Z2(I)=0
      YDEL2(I)=0
5109      CONTINUE
5100      CONTINUE
5001      CONTINUE
5000      IF(PRIME$TAH-1)5000,401,600
      401      CONTINUE
      1 ASIDE=2
      GC TO 3
      2 ASIDE=1
      3      CONTINUE
      JREG=INEGT
      IF(JREG=NUMREG)406,400,402
      406      IF(JREG)402,402,410
      402      JREG=NUMREG+1
      410      UC 415 I=1,MAX1M
      415      IF (TIME.LE.TAU(1)) 420,415
      415      CONTINUE
      IT=MAX1M
      GC TO 430
      420      IT=1
      430      NA0Z(JREG,IT,XSIDE)=NA0Z(JREG,IT,XSIDE)+P*ARRIVE
      YDEL(JREG,IT,XSIDE)=YDEL(JREG,IT,XSIDE)+YIELD*P*ARRIVE
      $FCGROUPS) 600,600,5110
      C      FIND APPROPRIATE CNTRY GROUP
5110      UC 5115 I=1,MAX1M
      5115      IF TIME .LE. TAU(1) 5114,5115
      5115      CONTINUE
      ITEM=MAX1M

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5114 IF=1
5113 IFFOUND=1
      DC 5111 I=1,CGRCUPS
      NGP=NGMGP(I)
      DC 5112 J=1,NGP
      IF (CNTYLCCT.EQ. CCODES(J,I,XSIDE)) 5116,5112
5116  NAGZ2(I,I,XSIDE)=NAGZ2(I,I,XSIDE)+PARRIVE
      YDEL2(I,I,XSIDE)=YDEL2(I,I,XSIDE)+YIELD+PARRIVE
      IFFOUND=2
      GO TO 5111
5112 CONTINUE
5111 CONTINUE
      GO TO (5500,600),IFOUND
5500 I=CGRCUPS+1
      NAGZ2(I,I,XSIDE)=NAGZ2(I,I,XSIDE)+PARRIVE
      YDEL2(I,I,XSIDE)=YDEL2(I,I,XSIDE)+YIELD+PARRIVE
600 RETURN
      END

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63140
63160
63170
63180
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63340
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63370
63380
63390
64000
65000

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5.415 SPCTR

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

SPCTR
SPECIAL
MAXES
IFRGS
PROCESS
EDITERM
EDITAPE

EXTERNAL SYMBOLS

THEND.
UNDOICT
ANCRF
TSM.
STM.
SLI.
UNSIWOL.

IDENT

U0051
U0042
02637
U0010
U0001
U1173
U0001
U0015

SPCTR

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EU U

PAGE NO.

5-4TS

PCTH

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EU

U

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6

P00313	.5001	00077	00073	00122					
P00075	.5003	00073	00073	00122					
P00077	.5004	00073	00073	00122					
P00273	.5006	00073	00073	00122					
P00103	.5007	00073	00073	00122					
P00313	.5100	00100	00100	00160					
P00161	.5101	00100	00100	00160					
P00164	.5102	00100	00100	00160					
P00201	.5105	00103	00103	00163					
P00246	.5107								
P00252	.5108								
P00312	.5109								
P00402	.5110								
P00462	.5111								
P00456	.5112								
P00426	.5113								
P00423	.5114								
P00413	.5115								
P00445	.5116								
P00471	.5500								
P00504	.6001	00470	00470	00470					
P00627	.ERASEM	00315	00470	00470					
P00041	.100000	00257	00201	00276					
P00004	.1101	00317	00317	00317					
P00007	.1102	00053	00152	00152					
P00012	.1103	00065	00127	00231					
P00020	.5103	00106	00127	00231					
P00034	.5106	00107	00127	00231					
P00443	J	00213	00213	00213					
P00104	JOUT	00242	00242	00242					
P00644	JREG	00311	00311	00311					
P00645	K	00202	00252	00252					
P00646	KK	00262	00265	00301					
C00153	LGLCH								
C00002	MAASM								
C00004	MAASOM								
C00007	MAAGHP								
C00000	MAAKLS								
C00005	MAALOC								
C00007	MAAMIS								
C00000	MAAREG								
C01005	MAATIA								
C00001	MAAHO								
C00000	NAGZ								
C01006	NAGZ2								
C02612	NAREGP								
C00754	NAREHEG								
C00752	NAREHIDE								
C00002	NC								
P00647	NGP								
P00650	NGPS								
C00000	NI								
C00001	NCUT								
C01746	NUMAP								

5.ATS

SPCTbl.

COICOM	NUMER	00067	00072	00072	00076	12/20/71	00677	00677	0	Page No.	7
C00001	NV	00067	00072	00072	00076	00076	00677	00677	00677	00120	00141
P00515	P00000.0	00522									
P00536	P00001.0	00542									
P00554	P00002.0	00557									
C00412	PAHRIE	00373									
C00372	PRIMETAH	00313									
X00002	GRADICT.	00000									
X00007	ONSIMEL.	00506									
C00151	SIDE	00316									
X00006	SLI.	00055									
P00042	SPCTHL	00042									
X00005	STH.	00105									
C00740	TAU	00057									
X00001	THEND.	00060									
C00342	TIRE	00351									
P00170	TS00001.	00112									
P00141	TS00002.	00133									
F0250	TS00004.	00207									
P00242	TS00005.	00234									
P00274	TS00006.	00266									
P00313	TS00007.	00305									
P00360	TS00010.	00350									
P00415	TS00011.	00405									
P00446	TS00012.	00432									
P00460	TS00013.	00440									
X00004	TSH.	00051									
P00544	UP00000.	00111									
P00561	UP00001.	00414									
P00571	UP00003.	00203									
P00600	UP00004.	00233									
P00611	UP00005.	00366									
C00147	VALUE	00323									
P00113	WS00001.	00121									
P00134	WS00002.	00142									
P00204	WS00003.	00254									
P00210	WS00004.	00251									
P00235	WS00005.	00243									
P00270	WS00006.	00273									
P00307	WS00007.	00312									
P00351	WS00010.	00361									
P00406	WS00011.	00406									
P00433	WS00012.	00405									
P00441	WS00013.	00401									
P00505	ASIDE	00422									
C00360	YDEL	00272									
C01366	YDEL2	00311									
C00257	YIELD	00375									

0023. SYMBOLS

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SUBROUTINE SPC1BLPT
  CSUBR   SPC1BLPT  270C171  *****
  C***** SPECIAL TABLES PRINT *****
  C***** SPC1BLPT PRINTS RESULTS OBTAINED IN SPC1BL
  C***** COMMON/SPECIAL/NAUZ(12,10,2),YDEL(12,10,2),TAU(10),NAME$10E(2)
  1 NAME$10E(12,2),NUMREG,MAATIM
  1 NAME$10E(12,10,2),YDEL(12,10,2),NUMOP(10,2),CCODES(20,10,2)
  1 NAME$10E(10,2),CONCUPS
  TYPE REAL NAUZ2
  TYPE INTEGER CONCUPS ,CCODES
  DATA (CONCUPS = 0)
  DIMENSION FAUZ2(12,10,2)
  EQUIVALENCE (FAUZ2,NAUZ2)
  DIMENSION FAUZ(12,10,2)
  EQUIVALENCE (FAUZ,NAUZ)
  NUMREG=NUMREG+1
  NSKTP=7*REGION
  NLIN=NUMREG+1
  NMANY=NUMREG
  DO 5 N=1,MAATIM
    UC 5 L=1,2
    UC 5 M=1,NLIN
    NAUZ2(M,N,L)=FAUZ(M,N,L)
    S CONTINUE
  51 CONTINUE
    UC 10 K= 1,2
    UC 11 I=1,NMANY
    UC 11 J=2,MAATIM
    NAUZ(I,J,K)=NAUZ(I,J,K)+ NAUZ(I,J-1,K)
    YDEL(I,J,K)= YDEL(I,J,K) + YDEL(I,J-1,K)
  11 CONTINUE
    UC 15 I=1,NMANY
    UC 15 J=1,MAATIM
    NAUZ(NLIN,J,K)=NAUZ(NLIN,J,K)+NAUZ(I,J,K)
    YDEL(NLIN,J,K)=YDEL(NLIN,J,K)+YDEL(I,J,K)
  15 CONTINUE
    NAME$10E(NLIN,K)=7* TOTAL
    NAME$10E(NMANY,K)=5*HOTHER
  10 CONTINUE
  PRINT 1000
  1000 FORMAT(1H1)
  UC 20 K= 1,2
  PRINT 1111,NAME$10E(K),NSKTP,TAU
  1111 FORMAT(//37X,38H CUMULATIVE NO. OF AYZS DELIVERED BY ,A4//98A,
  118HRY TARGET LOCATION/56A,5H TIME/1X,A7,4X,10F10,2)
  UC 20 J=1,NLIN
  IF (NAME$10E(J,K) .EQ. 1H ) 20,21
  21 PRINT 1112,NAME$10E(J,K), (NAUZ(I,J,K),I=1,MAATIM)
  20 CONTINUE
  1112 FORMAT(1X,A8,3X,10F10)
  UC 30 K=1,2
  PRINT 1113,NAME$10E(K),NSKTP,TAU
  1113 FORMAT(//37X,38H CUMULATIVE NEGATONS DELIVERED BY ,A4//98A,18HRY TA
  118HRY TARGET LOCATION //56A,5H TIME/1X,A7,4X,10F10,2)
  UC 30 J=1,NLIN

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```

IF (NAMEREG(J,K) .EQ. 1) J30=J1
31 PRINT 111, NAMEREG(J,K), (YDEL(J,I,K), I=1, MAXI(J))
30 CONTINUE
111% FORMAT(IX, AB, 3A, 10F10.1)
IF (NOCNE .EQ. 2) GO TO 50
50 NMANY=CGROUPS+1
NOCNE=2
NSPTYP=7HGROUP
NLIM=NMANY+1
DC 52 M=1, NLIM
DC 52 L=1, 2
NAMEREG(M,L)=NAMEGP(M,L)
DC 52 M=1, MAXTIM
NAGZ(M,NOL)=NAGZ2(M,NOL)
YDEL(M,NOL)=YDEL2(M,NOL)
52 CONTINUE
GO TO 51
40 RETURN
END

```

```

*0500
*1000
*1500
*2000
*2500
*3000
*3500
*4000
*4500
*5000

```


5.ATS SPCTBLPT

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IDENT SPCTBLPT

00/13
00115

SPCTBLPT
SPECIAL

02637

EXTERNAL SYMBOLS

01010100
TEND.
PRODUCT.
SYM.
SLC.
ENSINGL.

5.475 SPECTRLPT

P00663 UP000017.
 P00136 #S0J001.
 P00141 #S0J002.
 P00147 #S0J003.
 P00160 #S0J004.
 P00172 #S0J005.
 P00201 #S0J006.
 P00215 #S0J007.
 P00225 #S0J010.
 P00260 #S0J011.
 P00303 #S0J012.
 P00322 #S0J013.
 P00344 #S0J014.
 P00367 #S0J015.
 P00400 #S0J016.
 P00444 #S0J017.
 P00447 #S0J020.
 P00462 #S0J021.
 C00360 YDEL
 C01366 YDEL2
 0017: SYMMSLS

00136
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 00156
 00153
 00240
 00211
 00205
 00236
 00232
 00341
 00330
 00330
 00425
 00422
 00414
 00475
 00471
 00466
 00203
 00465

00433
 00162
 00211
 00236
 00336
 00330
 00422
 00414
 00475
 00203
 00407
 00405

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SURRCUTINE #RAGZ
COMMON/STIME/JDAY,JMOR,JYEAR,JMSUR,JM[IN]
DIMENSION IDTIME(2)
TARGETS 24SEP71
COMMON/KEYS/KLAT,KLONG,KEYOWN,KEYLOC,KEYFCN,KEYLAT,KEYREV
IKEYDES=KEYISK
COMMON/INDXTY(12000)
COMMON/Z/INTRT(250),NFCN(250),KREG(12),KLATPK(8000),LATLONG(1)
COMMON/3/INDESTR(1)
CEND
CUECLARE1 AGA AGY ANCH INTAN WHOTYPE
COMMON/PROCESS/INTANV,NC,INTCM(140),VALUE(500),DEF(500),LCLSC(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEFALSED
COMMON/EUTERM/ISATERM
COMMON/EDI/APE/INTP,NCUT,ITOUT(10),JSUT
EQUIVALENCE(AGA,VALUE(143))
TYPE INTEGER AGA
EQUIVALENCE(AGY,VALUE(142))
TYPE INTEGER AGY
EQUIVALENCE(ANCH,VALUE(145))
TYPE INTEGER ANCH
EQUIVALENCE(INTAN,VALUE(129))
TYPE INTEGER INTAN
EQUIVALENCE(WHOTYPE,VALUE(58))
TYPE INTEGER WHOTYPE
CUECLARE TIME CEP POUU
EQUIVALENCE(TIME,VALUE(124))
TYPE REAL TIME
EQUIVALENCE(CEP,VALUE(81))
TYPE REAL CEP
EQUIVALENCE(POUU,VALUE(80))
TYPE REAL POUU
CUECLARE SIDE IMEG
EQUIVALENCE(SIDE,VALUE(3))
TYPE INTEGER SIDE
EQUIVALENCE(IMEG,VALUE(51))
TYPE INTEGER IMEG
CUECLARE ANDV ITYPE
EQUIVALENCE(INDV,VALUE(128))
TYPE INTEGER INDV
EQUIVALENCE(ITYPE,VALUE(50))
TYPE INTEGER ITYPE
CUECLARE INTYLOCT INDEANG
EQUIVALENCE(INTYLOCT,VALUE(5))
TYPE INTEGER INTYLOCT
EQUIVALENCE(INDEANG,VALUE(42))
TYPE INTEGER INDEANG
CUECLARE INTYLOCT
EQUIVALENCE(INTYLOCT,VALUE(155))
TYPE INTEGER INTYLOCT
COMMON/WARHEAD/YIELDX(50),FFRACK(50),POUUX(50)
COMMON/ASAP/CEPA(20),I-MOA(20)
COMMON/CMB/CMBQ(100)
TYPE INTEGER CMBQ

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COMMON/COMMON/CEPR(40)
COMMON/MISSILE/CEPM(40)
COMMON/TAPES/ITAPE(10),MAXITAPE(10),NTP,NMOUT
COMMON/ITPZ/ITP
      MAXBLK      YAU(71) *****
COMMON/MAKES/MAINLS,MAXMH,MAXASP,MAXMIS,MAXDCK,MAXLSC,MAXNEU
1,MAXGRP
      MAXBLK *****
      DATA(IICNT=0)
      DATA(ILSHI=10000000)
      F_NAL STRIKE AND REST OUTPUT TAPES
      TYPE INTEGER ABZBLUS,AGZREUS,AGZBLONG,AGZNEURC
      DATA(NTP1=3), (NTP2=10), (NTP3=7), (NTP4=6)
1, (NTP5=9)
      TYPE INTEGER ABZBLUS,AGZREUS
      TO CHANGE DEGREES TO RADIANS, MULTIPLY BY DEGRAD
      DATA(DLGRAD=.0174533)
      DATA(ISTAR=0)
      COMMON/DCABZ/DCABZ,NDCABZ,NPRABZ,NJCS,NPSW
      COMMON/SPSYS/SPSYS(9+2)
      WRITE AGZTAPES IF NDSM SET TO 1
      GO TO (400,401),NDSM
401 RETURN
400 CONTINUE
      NMPEPRDY=24
      CONVERT ABZ, AGY FROM SUMS OF MILES TO SINGLE MILES
      CAGY=AGY
      CAGX=AGX
      LARG=CAGX/50.
      C OBTAIN ALAT AND ALONG
      NDLAT=IGET(KEYLAT,INIAH,INDXCITY)
      LATLONG(1)=KLATPR(NDLAT)
      JLAT=IGET(KLAT,1,LATLONG)
      ALONG=IGET(KLONG,1,LATLONG)
      ALAT=JLAT
      ALONG=JLONG
      XLAT=XLAT/1000.
      ALONG=ALONG/1000.
      CONVERT AGX, AGY TO LAT/LONG
      ALY=CAGY/60.80*XLAT
      ALX=CAGX/160.00*CSH(ALAT,DEGRAD)) * ALONG
      CONVERT LAT INTO DEGR,MIN,SEC,AND N CH S
      IFIXLY) 10+20+20
      10 ALY=ALY
      INS=LHS
      GO TO 21
      20 INS=LHS
      21 IYDEGR=ALY
      STEPP=ALY-IYDEGR
      STEPP=STEPP*60.
      IYMIN=STEPP
      STEPP=STEPP-IYMIN
      IYSEC=60.*STEPP*.5
      IFITSEC=60+20+20+25
      25 IYSEC=IYSEC-60

```


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C
NDESIG=NDESIG*ILSHI
PUT LEADING ZEROS IN INIAB
INIAB=INZER0(INIAB)
NUNSC=INZER0(NUNSC)
WRITE(11:200) IESS,IACG,ICMCD,INIAB,DATE(1),IDATE(2),
LATX,LONGX,NDESIG,IMEI,AFRACA,AYELDA,IMOB,KCEP,NTASK,CONTLOC,
INATYP,NVTYP,NUNSC
ENCODE(3:203),LFFRACA,AFRACA
203 FORMAT(13)
LFFRACA=INZER0(LFFRACA)
IF(AYELDA .LT. 100) LFFRACA=FH
319 WRITE(11:1,200) IESS,IACG,ICMCD,INIAB,DATE(1),IDATE(2),
LATX,LONGX,NDESIG,IMEI,LFFRACA,AYELDA,IMOB,KCEP,NTASK,CONTLOC,
INATYP,INVTYP,NUNSC
GC TO (304,303),NPSW
GC TO (304,303),NPSW
PRINT SIUAC TAPES IF REQUESTED
304 PRINT 204, IESS,IACG,ICMCD,INIAB,DATE(1),IDATE(2),
LATX,LONGX,NDESIG,IMEI,AFRACA,AYELDA,IMOB,KCEP,NTASK,CONTLOC,
INATYP,NVTYP,NUNSC
GC TO 303
320 ENDFILE ITC
ENDFILE ITC1
REWIND ITC
REWIND ITC1
REWIND IT
GC TO (404,405),ITUNE
404 ITCUNE=2
IT=AGZEDS
AGZNEOSWEN(P2
ITC=AGZREDSW
AGZNEOCENTP3
ITC1=AGZNEUNC
INLRD2
GC TO (472,473),NPSW
472 PRINT 451
451 FORMAT(11,10*,10HED SIUAC AGZNEOSW /)
473 CONTINUE
GC TO 303
405 GC TO (406,407),NPSW
C
PRINT WEST TAPES
406 PRINT 452
452 FORMAT(11,10*,10HBLUE WEST AGZBLUNC /)
ITC1=AGZBLUNC
INLRD1
475 READ(11:1,200) IESS,IACG,ICMCD,INIAB,DATE(1),IDATE(2),
LATX,LONGX,NDESIG,IMEI,LFFRACA,AYELDA,IMOB,KCEP,NTASK,CONTLOC,
INATYP,NVTYP,NUNSC
IF(ICEP,ITC1) 481,480
480 PRINT 207, IESS,IACG,ICMCD,INIAB,DATE(1),IDATE(2),
LATX,LONGX,NDESIG,IMEI,LFFRACA,AYELDA,IMOB,KCEP,NTASK,CONTLOC,
INATYP,NVTYP,NUNSC
GC TO 475
481 REWIND ITC1
GC TO (482,407),INLRD
482 INLRD=2
ITC1=AGZNEUNC

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S.415

WRA02

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P01704 A04Y	00620	00625	01131	01137	01221					
C00303 AGA	00309	00307								
C00304 AGY	00300	00301								
P01714 AGZALUDC	01224	01501								
P01710 AGZRLUS	00744	01125								
P01714 AGZRLUS	01222									
P01711 AGZREUDC	01530	01670								
P01707 AGZREUDS	00747	01126								
P01713 AGZREUDW	01527									
C00307 AKCH	00557									
P01705 AKCHU	00630	00635								
P01706 AKIN	00040									
P01737 H01IN	01740									
P01707 CAGY	00373	00374								
P01770 CAGY	00365	00430								
C00207 CEP										
C00000 CEPA										
C00000 CEPB										
C00300 CEPM										
C00153 CNRTLOC										
C00401 CATVLCCT	01101	01270	01352	01352	01352	01427	01427	01471	01614	01614
	01014	01654	00757	00761	01000	01001	01001	01003	01010	01017
	00755	00756	01057	01060	01065	01066	01067	01070	01071	01072
	01073	01076	01077	01078	01100	01102	01104	01106	01107	01110
	01104	01104	01212	01240	01250	01253	01254	01255	01256	01257
	01200	01201	01202	01204	01205	01206	01207	01271	01273	01274
	01333	01334	01335	01336	01340	01341	01342	01343	01344	01345
	01346	01347	01350	01351	01352	01356	01357	01357	01410	01411
	01410	01413	01414	01415	01416	01417	01420	01421	01422	01424
	01425	01426	01430	01433	01435	01436	01437	01438	01439	01456
	01457	01460	01461	01462	01463	01464	01465	01467	01470	01472
	01474	01475	01476	01477	01478	01479	01480	01481	01482	01483
	01604	01605	01606	01607	01610	01611	01612	01613	01614	01620
	01625	01634	01637	01640	01641	01642	01643	01644	01645	01647
	01650	01651	01652	01653	01655	01657	01660	01661		
	01062	01062								
	00434									
C00000 COMCD	01151	01152	01024	01025	01113	01215	01241	01372	01561	01705
X00010 C05F	00704	01705	01705	01705						
P01771 C05F										
P00016 C05F	01705									
C01133 CEF	00434	00435	00435	00435	00752	00763	00765	00771	00770	01005
P00014 CEF	00351	01003	01003	01003	01112	01110	01110	01113	01116	01141
P00001 CEF	01107	01112	01112	01112	01203	01214	01220	01235	01240	01244
	01125	01125	01125	01125	01320	01324	01331	01334	01373	01400
	01277	01302	01305	01305	01307	01315	01315	01322	01345	01555
	01440	01447	01500	01504	01507	01512	01515	01523	01545	
	01500	01570	01623	01625	01632	01633	01667	01701		
	01500	01500	01500	01506						
	01127	01132	01503	01506						
	00751	00775	01013	01303						
	00354	00356	01113	01117	01123	01706	01737			
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 002285 1110
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 002287 1112
 002288 1113
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 002295 1120
 002296 1121
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 002301 1126
 002302

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C00001	PLAAMS	01050	01372	01201	01314	01315	01310	01343	01400	01402	01605	01645
C00002	AC											
P00003	ACRSIG											
C00004	MOESIA											
C00005	ADGAGZ											
C00006	ACSR	00353	00353	01120	01120	01170	01310	01311	01315	01314		
C00007	MEACTY	00400	01154	01154	01154							
P00008	NDALAT	00401										
P00009	MMPERDY	00360										
C00010	NI											
C00011	ACUT											
C00012	MPHAGZ											
C00013	NPSW	01227	01227	01441	01441	01534	01534	01547	01547			
C00014	AKGUL	01001	01100	01207	01315	01351	01420	01470	01513	01553		
P00015	NTASK											
C00016	NTP											
P00017	ATP1	01222										
P00018	NTP2	01526										
P00019	NTP3	00743	01530									
P00020	NTP4	00740	01125									
P00021	NTP5	01223										
P00022	NUMLET	01304										
P00023	NUMSCR	01275	01425	01326	01357	01436	01470	01621	01601			
C00024	NY											
P00025	NTVTP	01274	01356	01434	01475	01600	01650					
P00026	AKPS	01610	01650									
C00027	NPSYS	01432	01432									
P00028	NTVTP	01272	01354	01473								
C00029	PDUD											
C00030	PDUDX											
X00031	01403100	00455	00404	00525	00534	00626	00636					
X00032	01403100	00452	00451	00470	00522	00531	00540	00621	00631	01035	01041	
X00033	01403100	00000	00350	01115								
X00034	01403100	01176	01301	01625								
X00035	01403100	01715										
X00036	01403100	01135	01140	01144	01202	01245	01511	01514	01511	01606		
X00037	01403100	00740	00740	00403	00406	00407	00527	00530	00533	00535		
X00038	01403100	00457	00460	01234	01234	01405	01440	01541	01544	01631		
X00039	01403100	01054	01207	01022	01111	01171	01213	01237	01276	01300	01370	01437
X00040	01403100	00762	01004	01557	01622	01602	01703					
X00041	01403100	01477	01544									
X00042	01403100	00616	00616									
X00043	01403100	01150										
X00044	01403100	01102										
X00045	01403100	01243	01507									
X00046	01403100	01220	01533	01504	01675	01722	01723	01724	01726	01727		
X00047	01403100	01252	01576	01732	01733	01734	01736	01736				
X00048	01403100	01030	01030	01032	01032							
X00049	01403100	00347										
X00050	01403100	01114										
X00051	01403100	01155										
X00052	01403100	00421	00425	00426	00431	00432						
X00053	01403100	00427	00430									
X00054	01403100											

5.4TS

8NA07

P02060 ALX
P02061 ALY
C00000 YICLUX
00455 SYMMOLS

00440
00452
C1033

00507
00441
01053

00512
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00451
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```

PROGRAM TABGEN      START *****
CSUBR  TABGEN      START *****
COMMON/EDITERM/ISWTERM
COMMON/PROCESS/NI,NV,NC,INITEM(100),VALUE(500),DEF(500),LCLCH(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEF,LCLCH
COMMON/SIZES/MAICOL,MAXROW,MAXCYC,MAXSET
COMMON/PASS/NSIDENCL,NPASS
COMMON/SWITCH/COLINSW,ROWINSW,CYCINSW,TRUESW,MAXROWSW,MAXCYCSW,
IMACOLSW,ADDSW,ROWSW,NCISDESW,VALCOLSW,NSEPSW
TYPE INTEGER COLINSW,ROWINSW,CYCINSW,TRUESW,ADDSW,ROWSW,VALCOLSW
COMMON/ITIME/ITIME,ATEMP,ATEMP
EQUIVALENCE (ATEMP,ATEMP)
COMMON/ITP/ITP
COMMON/ATTING/ICYCLE,IRCW,IADD,ICL,JSIDE
COMMON/EDITAPE/INTP,NGOUT,ITOUT(10),JCUT
CALL STORAGE
1 CONTINUE
  NPASS=1
  CALL INITAPE
5 ITAPE=1
  CALL INITEOIT(ITAPE)
  GO TO (6,7),NPASS
7 CALL INITIL
  GO TO 8
6 CALL SETUP
8 CALL INPTEM
505 CALL TRUTH
  GO TO (503,501),TRUESW
503 CALL CYCLER
  GO TO (500,501),CYCINSW
500 CALL ROWFIND
  GO TO (502,501),ROWINSW
502 CALL COLFIND
  GO TO (504,501),COLINSW
504 CALL TABLER
501 CALL NEXTITEM
  IF (VALUE(JSIDE) .EQ. 7) MENDTAPE 520,510
520 CALL TERMTAPE
  ITAPE=ITAPE+1
  INTP=INTP
  CALL SETREAD
  GO TO 501
510 GO TO (505,506),ISWTERM
506 CALL PRINTER
  CALL PAGESKP
  IF (MAXROWSW .EQ. 0) 600,603
600 IF (MAXCYCSW .EQ. 0) 601,604
601 IF (MAXCOLSW .EQ. 0) 602,605
603 PRINT 610
  GO TO 600
604 PRINT 611
  GO TO 601
605 PRINT 612
602 CONTINUE
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FTNS.5

```

610 FORMAT(1H,30HMORE NO.45 THAN DIMENSIONED FOR )
611 FORMAT(1H,30HMORE CYCLES THAN DIMENSIONED FOR )
612 FORMAT(1H,30HMORE COLUMNS THAN DIMENSIONED FOR )
      GC TO (1,2),NSEPS
      2 IF(NSIDENOM.EP.,.DHEU) 1,4
      4 NSIDENOM=3HRE
      NPASSE=
      GC TO
      END

```

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TABLER

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PROGRAM LENGTH
Entry Points
Block Names

TABLER

LSI10M
PROCESS
SIZES
PASS
SWITCH
TIME
LTP
ATTING
ESTIMATE

EXTERNAL SYMBOLS

MOEATY
INSGO
MODICI
STORAGE
INITIAL
INITIAL
INITIAL
SETUP
INITIAL
INITIAL
CYCLE4
COMFAC
COLFAC
TABLE4
RENTI10
RENTI10
SETHEAD
PROFIER
PAGESEP
SYM

DO102 SYMBOLS

TUENT

TABLER

W0205
W0002
W0001
W1173
W0000
W0002
W0014
W0002
W0001
W0005
W0015

5.4TS COLFIND

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

COLFIND

SIZES

TABINDEX

ATTEND

SWITCH

CCLS

PROCESS

COLVAR

EXTERNAL SYMBOLS

ORDDICT.

FILE

00111 SYMBOLS

IDENT

COLFIND

J0173

U0003

U0004

U0003

U0005

U0014

U0145

J1173

U1212

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```

SURROUTINE CYCLER
  CSURR      CYCLER  START
  COMMON/MAIC L,MAXRC,MAXCYC,MAXSET
  COMMON/INDEL/COLIND,CYCIND,ROWIND
  TYPE INTEGER COLIND,CYCIND,ROWIND
  COMMON/ATTIND/ICYLE,IRC,IAOD,ICOL,JSIDE
  COMMON/SWITCH/COLINSH,ROWINSH,CYCINSH,TRUESH,MAXRCPSH,MAXCYCPSH,
  MAXCOLSH,MAXDSH,ROWSDSH,NCSDSH,VALCOLSH,NSEPSH
  TYPE INTEGER COLINSH,ROWINSH,CYCINSH,TRUESH,ADDSH,ROWSDSH,VALCOLSH
  COMMON/PASS/NSIDEX,GPASS
  COMMON/CYCS/NAMECYC(50),NUMCYC,CYCIDE(50)
  TYPE INTEGER CYCIDE
  COMMON/PROCESS/NI,NV,NC,INITER(100),VALUE(500),DEF(500),LML2H(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,LML2H
  CYCINS=1
  IF(CYCIND) 50,0) 0,9
  8 CYCIND=1
  9 SC TO (10,11),NCSDSH
  10 IF(VALUE,JSIDE) 50, 4BLUE) 11,12
  12 CYCIND=2
  11 RETURN
  9 SC TO (20,17),NCSDSH
  20 SC TO (17,25),NSEPSH
  25 IF(NSIDEX) 50, VALUE(JSIDE)) 17,21
  21 CYCINS=2
  RETURN
  17 CONTINUE
  CYCIND=17(VALUE,ICYLE),NAMECYC,NUMCYC
  IF(CYCIND) 10,15
  15 SC TO (16,5),NCSDSH
  16 IF(CYCIDE(CYCIND) 50, VALUE(JSIDE)) 0,13
  13 NCYCIND=17(VALUE,ICYLE),NAMECYC(CYCIND+1),NUMCYC-CYCIND
  IF(NCYCIND) 1,1,14
  14 CYCIND=CYCIND+NCYCIND
  RETURN
  1 IF(NUMCYC 50, MAXCYC) 2,4
  2 MAXCYCS=MAXCYCS+1
  CYCINS=2
  RETURN
  4 NUMCYC=NUMCYC+1
  NAMECYC(NUMCYC)=VALUE(ICYLE)
  CYCIDE(NUMCYC)=VALUE(JSIDE)
  CYCIND=NUMCYC
  RETURN
  END

```

5.4TS

CYCLER

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

CYCLER

SIZES
TABINDEX
ATTINO
SWITCH
PASS
CYCS
PROCESS

EXTERNAL SYMBOLS
PRODUCT.
FILE

00104 SYMBOLS

IDENT

CYCLER

00142
00004
00004
00003
00005
00014
00002
00145
01173

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EU

J

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STATE

FORMAT

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

FORMATS

EXTERNAL SYMBOLS

OBJECT SYMBOLS

IDENT

00153

00015

00004

FORMAT

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ED

0

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```

SUBROUTINE INITIL
  CSUBR      INITIL      START      *****
  COMMON/ATTIND/ICYLE,IRCM,IADD,ICOL,JSIDE
  COMMON/SIZES/MAXCOL,MAXROW,MAXCYC,MAXSET
  COMMON/TARINDEX/COLIND,CYCIND,RCWIND
  TYPE INTEGER COLIND,CYCIND,RCWIND
  COMMON/SWITCH/COLINSW,ROWINSW,CYCINSW,TRUESW,MAXROWSW,MAXCYCSW,
  1 MAXCOLSW,ADDROWSW,ROWINSW,NCOLINSW,VALCOLSW,NSEPSW
  TYPE INTEGER COLINSW,ROWINSW,CYCINSW,TRUESW,ADDROWSW,RCWINSW,VALCOLSW
  COMMON/PASS/NSIDENSW,NPASS
  COMMON/CYCS/NAMECYC(50),NUMCYC,CYCSIDE(50)
  TYPE INTEGER CYCSIDE
  COMMON/RCWS/NAMERCW(50),NUMRCW(50)
  COMMON/COLS/NCOL,RANGES(100)
  TYPE INTEGER RANGES
  COMMON/TOOL/TABLE(9600),NTAB,E(9600),XVAL,MVAL
  EQUIVALENCE (TABLE,NTABLE),(XVAL,MVAL)
  1=COLUMNS, J=ROWS, K=CYCLES
  COMMON/SETS/SETNAME(100),SETMEL(100),SETLEFT(100),SETRIGHT(100),
  1 VALORSET(100),SETVAL(100),SETTRUE(100),SETDEF(100),NSETS
  TYPE INTEGER SETNAME,SETREL,SETLEFT,SETRIGHT,SETVAL
  TYPE LOGICAL VALORSET,SETTRUE,SETDEF
  COMMON/HEAD/HEAD,HEAD(14,5)
  TYPE INTEGER HEAD
  COMMON/COLVAR/MCOL(50),NAMECOL(12,50)
  COMMON/INITROW/NUMROWS,INITROW(100),MAXROW
  GO TO (30,31),NPASS
  30 NUMROWS=0
  MAXROW=100
  MAXCOL=12
  MAXSET=100
  MAXTAB=9600
  DO 2 I=1,100
    INITROW(I)=1H
  2 RANGES(I)=0
  NCOL=0
  NCOL=0
  NSETS=0
  NHEAD=0
  ICYLE=0
  IRCM=0
  IADD=0
  ICOL=0
  31 GO TO (20,32),NPASS
  32 GO TO (21,21,20),VALCOLSW
  20 DO 4 I=1,MAXCYC
    MCOL(I)=0
    DO 5 J=1,MAXCOL
      NAMECOL(J,I)=1H
    4 CONTINUE
  21 DO 6 I=1,MAXCYC
    NUMROW(I)=0
    NAMECYC(I)=1H
    CYCSIDE(I)=1H
    DO 3 J=1,MAXROW
      NAMERCW(J,I)=1H
    3 NAMERCW(J,I)=1H

```

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6 CONTINUE
00 1 1=1,MAXTAB
1 TABLE(1)=0
NUMCYC=0
MAXROWSW=0
MAXCYCSW=0
MAXCOLSW=0
END

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SATS INITIL INITIL INITIL INITIL INITIL

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EU

I

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

INITIL
ATTEND
SIZES
TABLE-DEK
SWITCH
PASS
CYCS
ROWS
COLS
1
SETS
HEAG
COLVAR
INITROM
00224
00010
00005
00006
00003
00014
00002
00145
00756
00145
22601
01001
00107
01212
00145

EXTERNAL SYMBOLS
00143 SYMBOLS
0000101.

FTNE.5

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```
CSUBR      FUNCTION INTREL(INREL)
            INTREL START
            DIMENSION IRF(10)
            DATA (IRF,6HANDNGT,5HORNGT,3HAND,2MCM,2HEQ,2HNE,2HGT,2HLT,2HGE,2HL
            IE),
            INTREL=ITLE(INREL,IRF,10)
            END
```

1000
5000
2000
3000
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5000
6000

SATS INTREL

PROGRAM LENGTH
ENTRY POINTS INTREL
EXTERNAL SYMBOLS
OBJECT.
FILE
00017 SYMBOLS

IDENT

00063
00015

INTREL

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1

```

FUNCTION NVALFIND(IIS,MP1,MP2)
  CSUM      NVALFND START *****
  1 IF(MP1 .AND. .NOT. MP2) 11,12
  2 IF(MP1 .OR. .NOT. MP2) 11,12
  3 IF(MP1 .AND. MP2) 11,12
  4 IF(MP1 .OR. MP2) 11,12
  5 IF(MP1 .EQ. MP2) 11,12
  6 IF(MP1 .NE. MP2) 11,12
  7 IF(MP1 .GT. MP2) 11,12
  8 IF(MP1 .LT. MP2) 11,12
  9 IF(MP1 .GE. MP2) 11,12
  10 IF(MP1 .LE. MP2) 11,12
  11 NVALFND=1
  12 NVALFND=0
  RETURN
END

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5.4TS NVALFIND

PROGRAM LENGTH
ENTRY POINTS NVALFIND
EXTERNAL SYMBOLS 083DICT.
00066 SYMBCLS

IDENT

NVALFIND

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```

SUBROUTINE PRINTER
  CSUARR  PRINTED  START *****
  COMMON/DIRECTRY/IDF,LASTLIST,NOIMDIN,NDIMLIST,ATTNAME(500),
  1      IFWHAT(500),ICDDE(500),DEFAULT(500),IOEFAULT(500),
  2      N1(500),FN1(500),N2(500),FN2(500),LISTCHK(500),
  3      GLCB(500),LISTVALS(2000)
  EQUIVALENCE(N1,FN1),(N2,FN2),(DEFAULT,IOEFAULT)
  TYPE LOGICAL LISTCHK,GLCB
  TYPE INTEGER ATTNAME
  EQUIVALENCE(IGCB,LISTCHK),(LOG2,GLCB)
  COMMON/JCDE/TABCODE,IFWHAT
  TYPE INTEGER TABCODE
  COMMON/SWITCH/COLINSM,ROWINSM,CYCINSM,TRUESM,MAXROWSM,MAXCYCSM,
  1      MAXCOLSM,ADDROW,ROWSM,NGSIDSM,VALCOLSM,NSEPSM
  TYPE INTEGER COLINSM,ROWINSM,CYCINSM,TRUESM,ADDROW,ROWSM,VALCOLSM
  COMMON/CYCIS/NAMECYC(50),NUMCYC,CYCISIDE(50)
  TYPE INTEGER CYCISIDE
  COMMON/ROWS/NAMEROW(50,50),NUMROW(50)
  DIMENSION JCFORM(10)
  DATA (JCFORM(I),I=1,10) /44,15,14,14,14,14,14,14,14,14/
  COMMON/JCFORM/ROWFORM,TABFORM,COLFORM,CYCFORM
  TYPE INTEGER ROWFORM,TABFORM,COLFORM,CYCFORM
  COMMON/001/TABLE(9600),NTABLE(9600),IVAL,MVAL
  EQUIVALENCE (TABLE,NTABLE),(IVAL,MVAL)
  COMMON/SIZES/MAXCOL,MAXROW,MAXCYC,MARSET
  COMMON/ATTING/CYCLE,IRCM,IAUD,ICOL,JSIDE
  COMMON/TARINDEX/COLIND,CYCIND,ROWIND
  TYPE INTEGER COLIND,CYCIND,ROWIND
  COMMON/COLS/MCOL,NAMES(100)
  TYPE INTEGER NAMES
  COMMON/HEAD/HEAD,HEAD(1,5)
  TYPE INTEGER HEAD
  DIMENSION COLADD(16),NCLADD(16)
  EQUIVALENCE (NCLADD,COLADD)
  EQUIVALENCE (ROWADD,NCLADD)
  EQUIVALENCE (TRCADD,NTRCADD)
  DIMENSION TCCLADD(16),NTCCLADD(16)
  EQUIVALENCE (TCCLADD,NTCCLADD)
  EQUIVALENCE (TCIMC,NTCICM)
  DATA (JCFORM(I),I=1,10) /22,3,3,3,3,3,3,3,3,3/
  DIMENSION JCFORM(15)
  COMMON/COLVAR/MCOL(50),NAMECOL(12,50)
  DIMENSION JFCM(13)
  COMMON/FORMATS/INCHD,NFCHD,INADS,IF2X
  EQUIVALENCE (INCHD,INCHD),(NFCHD,NFCHD),(INADS,INADS)
  NFCHD=NFCHD
  IF2X=2
  IF (NUMCYC) 41,61,50
  41 GO TO (42,43),NCSIDESM
  42 NUMCYC=2
  GO TO 40
  43 NUMCYC=1
  40 CONTINUE
  DO 50 I=1,16
  50 TCCLADD(I)=0
  TOTPCMS=

```

```

DC 8 K=1,NDCYC
  GPARI=(K-1)*MARCM
  JIFORM(2)=IM
  CALL PAGESKP
  GC TO (31,32,33)*VALCOLS*
3: CONTINUE
  NAMECOL=COL(K)-1
  NAMECOL=COL(K)
  GC TO 32
30 CONTINUE
  NAMECOL=COL+1
  NAMECOL=COL
32 IF(NAMECOL.EQ. 12) 1,2
  1 JIFORM(8)=IM
  JZ=IM.
  GC TO 5
  2 IF(NAMECOL.EQ. 11) 3,4
  3 JIFORM(6)=ZMIX
  JZ=ZMIX+1*
  GC TO 5
103 FORMAT(18)
  4 JIFORM(18)=ZMIX
  JZ=ZMIX+2*
  5 JIFORM(16)=TABFORM
  24 JIFORM(4)=CYCFORM
  JIFORM(11)=FM17//2*
  IF(ICYCLE.EQ.44,45)
25 PRINT JIFORM,ATTNAME(ICYCLE),NAMECYC(K)
44 CONTINUE
  GC TO (33,37)*NCSIDES*
  33 JIFORM(4)=ZMAB
  JIFORM(11)=ZM(2*
  IF(ATTNAME(ICYCLE).EQ. 44SIDE) 37,39
39 CONTINUE
  PRINT JIFORM,ATTNAME(JSIDE),CYCSIDE(K)
37 CONTINUE
  PRINT 103
  PRINT 101-(NAMEAD11,IM),I=1,14),(MEL,NHEAD)
101 FORMAT(10X,7(A2,2))
  IF(ICYCL) 305,305,304
305 COLFORM=ZMAB
  GC TO 306
304 PRINT 102,ATTNAME(ICYCL)
1,2 FORMAT(12X,A8)
306 JIFORM(11)=ZM(1X*
  JIFORM(2)=ZMAB
  JIFORM(3)=ZM(2*
  JIFORM(9)=ZM(2X*
  NHEAD=5HTCTAL
  JIFORM(10)=ZHAS)
  JIFORM(16)=COLFORM
  ENCODE(8,103,JIFORM(4)) NAMECOL
  GC TO (35,34,35)*VALCOLS*
35 PRINT JIFORM,ATTNAME(IRCW),NAMECOL(IRC,K),IRC,I,NAMECOL
  1,NTHEAD
  GC TO36

```

```

34 PRINT JXFORM,ATTNAME(IJROW),(RANGES(IH),IH=1,NNCOL)
1,NTHEAD
36 GC TC (51,51),52,52,52,51),TABCODE
51 JZFORM(I)=4H(1A,
JZFORM(30)=1H)
JZFORM(3)=3+2X
DC 53 IJ=28,2
JZFORM(IJ)=JZZ
53 JZFORM(IJ)=1H
GC TC 62
52 JZFORM(2)=RCWFQRM
JZFORM(3)=4H,1X,
JZFORM(9)=1H
JZFORM(10)=1H
ENCODE(8,103,JZFORM(4)) NNCOL
62 CONTINUE
TRCWADD=0
DC 10 L=1,NNCOL
CCLADD(L)=C
10 CONTINUE
JZFORM(6)=TABFORM
NNRC=NUMROW(K)
DC 7 I=1,NNRC
JZFORM(2)=RCWFQRM
NNPART=(I-1)*NPART+MAXCOL
RCWADD=0
DC 6 L=1,NNUM
IND=NPART+L
GC TC (11,11,12,12,6,6,11)TABCODE
11 RCWADD=RCWADD+TABLE(IND)
CCLADD(L)=CCLADD(L)+TABLE(IND)
TRCWADD=TRCWADD+TABLE(IND)
TCCLADD(L)=TCCLADD(L)+TABLE(IND)
TTCROW=TTCROW+TABLE(IND)
GC TC (201,207),IFWHAT
201 WCRDIN=TABLE(IND)
CALL FORMAT
207 JZFORM(2*L+3)=NFCRMT
GC TC 6
12 RCWADD=RCWADD+TABLE(IND)
NCCLADD(L)=NCCLADD(L)+TABLE(IND)
NTRCWADD=NTRCWADD+TABLE(IND)
NTCCLADD(L)=NTCCLADD(L)+TABLE(IND)
NTSTCH=NTSTCH+TABLE(IND)
6 CONTINUE
NSTART=NPART+1
NEND=NPART+NNUM
GC TC (60,60,61,61,61,61,60),TABCODE
60 GC TC (202,208),IFWHAT
202 WCRDIN=RCWADD
CALL FORMAT
208 JZFORM(2+NNUM+5)=NFCRMT
PRINT JZFORM,NAMEHCW(I,K),(TABLE(IJ),J=NSTART,NEND),RCWADD
GC TC 7
61 CONTINUE
PRINT JZFORM,NAMEHCW(I,K),(TABLE(IJ),J=NSTART,NEND),RCWADD

```

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```

7 CONTINUE
  GC TO (55,55,54,54,54,55),TABCODE
55 JZFCRM(2)=8*H TOTAL
  JZFCRM(1)=4*H(34)
  DC 56 IJ=1,NXNUM
  GC TO (203,209),IFWHAT
203 WORDIN=CCLOAD(IJ)
  CALL FORMAT
209 JZFCRM(2)=IJ*3=NFCRMT
56 CONTINUE
  GC TO (204,210),IFWHAT
204 WORDIN=TCRWADD
  CALL FORMAT
210 JZFCRM(2)=NXNUM*5=NFCRMT
  PRINT JZFCRM, (CCLOAD(I),L=1,NXNUM),TCRWADD
  GC TO 8
54 CONTINUE
  JXFCRM(1)=4*H(44)
  JXFCRM(2)=7*H(57)TOTAL
  PRINT JXFCRM, (CCLOAD(I),L=1,NXNUM),TCRWADD
8 CONTINUE
  PRINT 104
104 FORMAT('///20X,20HTOTAL FOR ALL CYCLES /')
  GC TO (57,57,56,58,58,58,57),TABCODE
57 DC 59 IJ=1,NXNUM
  GC TO (205,211),IFWHAT
205 WORDIN=TCCLADD(IJ)
  CALL FORMAT
211 JZFCRM(2)=IJ*3=NFCRMT
59 CONTINUE
  GC TO (206,212),IFWHAT
206 WORDIN=TCICRM
  CALL FORMAT
212 JZFCRM(2)=NXNUM*5=NFCRMT
  PRINT JZFCRM, (TCCLADD(I),L=1,NXNUM),TCICRM
  RETURN
58 CONTINUE
  PRINT JXFCRM, (TCCLADD(I),L=1,NXNUM),TCICRM
100 FORMAT(/)
  END
168000
169000
170000
171000
172000
173000
174000
175000
176000
177000
178000
179000
180000
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182000
183000
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192000
193000
194000
195000
196000
197000
198000
199000
200000
201000
202000
203000
204000
205000
206000
207000

```

IDENT PRINTER

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

PRINTER
DIRECTRY
JXCODE
SWITCH
CYCS
ROWS
JXFORM
1
SIZES
ATTIND
TABINDEX
COLS
HEAD
COLVAR
FORMATS

J1454
00212
11654
00002
00014
00145
04766
00004
22601
00004
00005
00003
00145
00107
01212
00004

EXTERNAL SYMBOLS

TREND.
00001CT.
PAGESKP
FORMAT
STM.
ENC.
0001NGL.

00426 SYMBOLS

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```

SUBROUTINE ROWFIND
  CSUBR      ROWFIND  START *****
  COMMON/SIZES/MAXCOL,MAXROW,MAXCYC,MAXSET
  COMMON/TABINDEX/COLIND,CYCIND,ROWIND
  TYPE INTEGER COLIND,CYCIND,ROWIND
  COMMON/STITCH/COLINDS,ROWINDS,CYCINDS,TRJES,MAXCOLS,MAXCYCS,
  1 MAXCOLS,ADDROW,ROWINDS,NOISIDES,VALCOLS,INSEPSW
  TYPE INTEGER COLINDS,ROWINDS,CYCINDS,THUES,ADDROW,VALCOLS
  COMMON/ATTIND/ICYCLE,INROW,IAUD,ICOL,ISIDE
  COMMON/ROWS/NAMEROW(50),NUMROW(50)
  COMMON/PROCESS/NI,NJ,NC,INITER(100),VALUE(500),DEF(500),L6L0b(500)
  TYPE INTEGER VALUE
  TYPE LOGICAL DEF,L6L0b
  COMMON/INTROW/NUMROWS,INTROW(100),MAROW
  ROWINDS=1
  ROWIND=1
  GO TO (11,9),ROWIND
  11 IF(ROWIND) 12,12,0
  12 NRIND=1
  VALUE(ROWIND)=NAMEROW(1,CYCIND),NUMROW(CYCIND)
  IF(NRIND) 5*5,0
  9 CONTINUE
  IF(ROWIND) 1,1,0
  1 IF(NUMROW(CYCIND) .EQ. MAXROW) 2,0
  2 MAXROW=NUMROW(CYCIND)+1
  5 ROWINDS=2
  6 RETURN
  4 NUMROW(CYCIND)=NUMROW(CYCIND)+1
  NAMEROW(NUMROW(CYCIND),CYCIND)=VALUE(ROWIND)
  ROWIND=NUMROW(CYCIND)
  RETURN
END

```

IDENT ROWFIND

00126
00003
00004
00003
00014
00005
04766
01173
00146

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES
ROWFIND
SIZES
TABINDEX
SWITCH
ATTEND
ROWS
PROCESS
INITROW

EXTERNAL SYMBOLS 00000001.
FILE

00075 SYMBOLS

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```

301 MAXROW=30
MAXCYC=26
305 NSEPSW=1
CALL INITIL
GC TO 997
300 MAXROW=NUMGET(NX(3),8)
MAXCYC=NUMGET(NX(5),8)
IF(MAXROW=MAXCYC*2 .GT. 800) 302,304
302 IF(MAXROW=MAXCYC*2 .GT. 800) 303,306
303 PRINT 106,NX
IXSWW=2
106 FORMAT(3H **8(A8,2X),5X,20HDIMENSIONS TOO LARGE)
GC TO 998
304 MAXCYC=MAXCYC*2
NSEPSW=1
GC TO 998
306 NSEPSW=2
NSIDENCM=HBLUE
998 CALL INITIL
3 READ 100,NX
105 FORMAT(1H ,8(A3,A2))
PRINT 105,NX
100 FORMAT(8(A8,A2))
997 CONTINUE
ICOMM=ITL(NX(1),ICOMMAND,NCOMM)
IF(ICOMM) 213,213,17
17 GC TO (150,60,70,90,200,230,240),ICOMM
*****SET*****
C 1 LOGREL=INTREL(NX(7))
IF(LOGREL) 2,2,4
2 PRINT 101,NX
101 FORMAT(3H **8(A8,A2),5X,23HIMPROPER SET DEFINITION)
IXSWW=2
GC TO 3
4 IF(NSETS.EQ. MAXSET) 5,7
5 PRINT 102
102 FORMAT(3H **,19HNO OF SETS EXCEEDED)
IXSWW=2
GC TO 3
7 NSETS=NSETS+1
SETREL(NSETS)=LOGREL
IF(LOGREL.GT. 4) 8,14
SET ATTR OPER VALUE
C 8 SETNAME(NSETS)=NX(3)
SETLEFT(NSETS)=ITL(NX(5),ATTNAME,IDEF)
IF(SETLEFT(NSETS)) 2,2,9
9 IC=ICCODE(SETLEFT(NSETS))
GC TO (11,11,10,10,12,12,11),IC
10 SETRIGHT(NSETS)=NUMGET(NX(9),8)
GC TO 13
11 NFORM(2)=IFORMAT(SETLEFT(NSETS))
DECODE(8,NFORM,NX(9)) SETRIGHT(NSETS)
GC TO 13
12 SETRIGHT(NSETS)=NX(9)
13 VALORSET(NSETS)=1
SETTRUE(NSETS)=1

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```

      SETDEF(NSETS)=1
      GO TO 3
      AND OR NOT DEFINITIONS
    C 14 CONTINUE
      SETNAME(NSETS)=NX(3)
      SETLEFT(NSETS)=ITLE(NX(5),SETNAME,NSETS)
      IF(SETLEFT(NSETS)) 2,2,15
    C 15 VALONSET(NSETS)=0
      SETTRUE(NSETS)=1
      SETTRUE(SETLEFT(NSETS))=0
      SETRIGHT(NSETS)=ITLE(NX(9),SETNAME,NSETS)
      IF(SETRIGHT(NSETS)) 2,2,16
    C 16 SETTRUE(SETRIGHT(NSETS))=0
      SETDEF(NSETS)=1
      GO TO 3
      *****HEAD*****
    C 50 IF(NHEAD.EQ. 5) 3,52
      52 NHEAD=NHEAD+1
      02 53 I=1,14
      53 HEAD(I,NHEAD)=NX(I,2)
      GO TO 3
      *****CYCLE*****
    C 60 IF(NX(3).EQ. 6,NCSIDE) 61,64
      64 ICYCLE=ITLE(NX(3),ATTNAME,IDEF)
      CYCFORM=IFORMAT(ICYCLE)
      IF(ICYCLE) 62,62,65
      65 IF(NX(5).EQ. 6,NCSIDE) 61,63
      61 NCSIDESW=2
      GO TO 3
      62 PRINT 63,NX
      63 FORMAT(3H **,8(A8,A2),5X,26HATTRIBUTE NOT IN DIRECTORY)
      IXSW=2
      GO TO 3
      *****ADD*****
    C 70 IF(NX(3).EQ. 1H ) 80,71
      71 ADDSW=1
      IF(NAT=1)
        IADD=ITLE(NX(3),ATTNAME,IDEF)
        TABCODE=ICCODE(IADD)
        TABFORM=IFORMAT(IADD)
        IF(NX(5).EQ. 1H ) 72,73
      73 TABFORM=NX(5)
      IF(NAT=2)
      72 IF(IADD) 62,62,3
      *****CCOUNT*****
    C 80 ADDSW=2
      IF(NAT=1)
        TABFORM=2H1R
        TABCODE=3
        IF(NX(5).EQ. 1H ) 3,81
      81 TABFORM=NX(5)
      IF(NAT=2)
      GO TO 3
      *****RCW*****
    C 90 RCW=ITLE(NX(3),ATTNAME,IDEF)
      RCWFORM=IFORMAT(RCW)

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IF(IHCH) 62,62,91
91 IF(INX(5) .EQ. 1H ) 92,93
92 ROWS#2
  GO TO 4
93 ROWS#1
  NAOD#4
  NN#12
94 95 I=1,NN,2
  IF(INX(I,NAOD) .NE. 1H ) 94,3
94 IF(NUMROWS .EQ. MAXROW) 3,97
97 NUMROWS=NUMROWS+1
  DECODE(R,ROWFQ,MAX(I,NAOD)) [NITROW:NUMROWS]
95 CONTINUE
  NAOD#7
  NN#16
  READ 100,NX
  PRINT 105,NX
  ICMM=ITL(INX(1),ICMMAND,NCMM)
  IF(ICMM) 96,96,17
  *****COLUMN*****
C 200 ICCL=ITL(NX(3),ATTNAME,IDEF)
  COLFORM=IFORMAT(ICCL)
  IF(ICCL) 62,62,202
202 NCCL#0
  IF(INX(5) .EQ. 5MATCH) 203,211
  LIST TO MATCH ON FOLLOWS
C 203 VALCOLSW#1
215 IC=ICCODE(ICCL)
  NFORM(2)=IFORMAT(ICCL)
  NN#10
  NAOD#6
209 DO 210 I=1,NN,2
  IF(INX(I,NAOD) .EQ. 1H ) 3,217
219 GO TO (220,207,220),VALCOLSW
220 IF(NCCL .EQ. 100) 3,208
207 IF(NCCL .EQ. MAXCOL) 3,208
208 NCCL=NCCL+1
  GO TO (204,204,205,205,206,206,204),IC
205 NANGES(NCCL)=NUMGET(NX(I,NAOD),8)
  GO TO 210
204 DECODE(R,NFORM,NX(I,NAOD)) RANGES(NCCL)
  GO TO 210
206 NANGES(NCCL)=NX(I,NAOD)
210 CONTINUE
  NAOD#9
  READ 100,NX
  PRINT 105,NX
  ICMM=ITL(INX(1),ICMMAND,NCMM)
  IF(ICMM) 216,216,17
216 NP#16
  GO TO 209
211 IF(INX(5) .EQ. 3MAX) 212,217
217 IF(INX(5) .EQ. 1H ) 218,213
218 VALCOLSW#3
  GO TO 3
213 PRINT 214,NA

```

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PAGE NO. 5

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```

21* FORMAT(3H **,8(A8,A2),5X,15HIMPROPER FORMAT)
   IKS#2
   GO TO 3
   MAXIMUM FOR EACH COLUMN FOLLOWS
212 VALCOLS#2
   GO TO 215
   *****RUN*****
C 230 CONTINUE
   GO TO (232,233),IIS#
232 RETURN
233 CALL INITIL
   GO TO 999
   *****STOP*****
C 240 WRITE(44,7777)
   7777 FORMAT(1H **** PROCESSOR TAGEN  COMPLETED ****)
   STOP
   END
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
237000
238000
239000
240000

```

IDENT SETUP

PROGRAM LENGTH SETUP
ENTRY POINTS
BLOCK NAMES

PASS 01331
DIRECTRY 00171
SEPS 00002
SIZES 11654
ATTNO 01001
SWITCH 00004
RCHS 00005
COLS 00014
HEAD 00766
INITRCW 00145
COMMAND 00107
JXFORM 00146
JXC00E 00015
LTIME 00004
00002

EXTERNAL SYMBOLS

THEND.
Q3010/40
Q00STOP
W00DICT.
LILE
PAGESKP
INITIL
NUMGET
INTREL
YSH.
DEC.
STM.
SLD.
SLI.
QNSINBL.

00346 SYMBOLS

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FTN5.5

```

SUBROUTINE TABLER
  CSURM  TABLER  START  *****
COMMON/001/TABLE(9000),NTABLE(9000),XVAL,MVAL
EQUIVALENCE (TABLE,NTABLE),(XVAL,MVAL)
COMMON/ATTIND/ICYCLE,IRCM,IAUD,ICOL,JSIDE
COMMON/JXCODE/TABCODE,IFMAT
TYPE INTEGER TABCODE
COMMON/PROCESS/NI,NV,NC,IN[TEK(100),VALUE(500),DEF(500),LGLCH(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEF,LGLCH
TYPE INTEGER COLINS,RGWSINS,CYCINSM,TRUESM,ADD5M,RG4SM,VALCOLSM
COMMON/SWITCH/COLINS,RGWSINS,CYCINSM,TRUESM,MAXROWS4,MAXCYCSM,
IMAXCOLSM,ADD5M,RGWSM,NCIDESM,VALCOLSM,NSEPSM
COMMON/TAHINDEX/COLIND,CYCIND,RG4IND
TYPE INTEGER COLIND,CYCIND,RG4IND
COMMON/SIZES/MAXCOL,MAXROW,MAXCYC,MAXSET
IND=COLIND-1,MAXCOL*(ROWIND-1)+MAXROW*(CYCIND-1)+1
GO TO (1,2),ADD5M
2 NTABLE(IND)=NTABLE(IND)+1
RETURN
1 MVAL=VALUE(IAUD)
GO TO (3,3,4,4,5,5,3),TABCODE
5 RETURN
3 TABLE(IND)=TABLE(IND)+XVAL
RETURN
4 NTABLE(IND)=NTABLE(IND)+MVAL
RETURN
END

```

1000
10000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
18000
19000
20000
21000
22000
23000
24000
25000
26000
27000

IDENT TABLER

PROGRAM LENGTH 00062
ENTRY POINTS 00003
BLOCK NAMES 22601
 1 00005
 ATTIND 00002
 JACODE 01173
 PROCESS 00014
 SWITCH 00003
 TAHINDEX 00004
 SIZES

EXTERNAL SYMBOLS 08001CT.
 00064 SYMBOLS

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```

SURROUTINE TRUTH
CSUBR  TRUTH  START
COMMON/SWITCH/COLINSW,ROINS,CYCINSW,TRUESW,MAXCHWS,MACYCWS,
IMACOLSW,ADDWS,ROWSW,NCWSIDES,VALCOLSW,NSEPSW
TYPE INTEGER COLINSW,ROWSW,CYCINSW,TRUESW,ADDWS,ROWSW,VALCOLSW
TRUESW=1 FOR ACCEPT ITEM, 2 FOR REJECT
COMMON/PROCESS/NI,NV,NC,INITER(100),VALUE(500),DEF(500),LGLCH(500)
TYPE INTEGER VALUE
TYPE LOGICAL DEF,LGLCH
COMMON/SETS/SETNAME(100),SETMEL(100),SETLEFT(100),SETRIGHT(100),
IVALCHSET(100),SETVAL(100),SETTRUE(100),SETDEF(100),NSETS
TYPE INTEGER SETNAME,SETMEL,SETLEFT,SETRIGHT,SETVAL
TYPE LOGICAL VALCHSET,SETTRUE,SETDEF
DO 3 I=1,NSETS
  IF(SETDEF(I)) 1,3
  1 IF(IVALCHSET(I)) 5,6
  5 SETVAL(I)=NVALFIND(SETREL(I),VALUE(SETLEFT(I)),SETRIGHT(I))
  7 IF(SETTRUE(I)) 2,3
  2 IF(SETVAL(I)) 3,4
  6 SETVAL(I)=NVALFIND(SETREL(I),SETVAL(SETLEFT(I)),SETVAL(SETRIGHT(I))
  1)
  GO TO 7
  3 CONTINUE
  TRUESW=1
  RETURN
  4 TRUESW=2
  END

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1000
11000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
18000
19000
20000
21000
22000
23000
24000
25000
26000

5.ATS TRUTH

PROGRAM LENGTH
ENTRY POINTS
BLOCK NAMES

TRUTH

SWITCH
PROCESS
SETS

EXTERNAL SYMBOLS

Q300G04U
Q800DICT.
NVALFIND

00062 SYMBOLS

IDENT

U0102
U0003
U0014
U1173
U1001

TRUTH

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EO

0

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1

```

PROGRAM HISTP
CSUBR HISTP 50C171 *****
TYPE INTEGER EVENT,BCCDE,TYPE,ZONE,TAIM,DGA,DSY,DSZ,AGX,AGY,AGZ
1,TARLIST
TYPE INTEGER CODE,SIDE
DIMENSION NPENZ(63)
EQUIVALENCE (NPENZ,NHISTOUT(8))
EQUIVALENCE (IDEN,NHISTOUT(3)),(LEND,NHISTOUT(5))
EQUIVALENCE (HTIME,TIME)
COMMON/NAME$/NAME$IDE(2),NAMECLAS(15),NAMETYPE(250)
COMMON/ITP/ITP
COMMON/THORD/ITWOND
COMMON/NOPRINT/NOPRINT
COMMON/MTIDENT/MTIDENT
COMMON/BRKAPCINT/ATPECUM(15),NBLUETYP(15),INDREGL(15)
INDHEGTY(250)
1,KCLASS,1,NEG,1,LENT,1,UD,ZONE,NDECCYS,1,ALT,INCM,ASATYPE,RCQUE,NHIST
1,OUT(230)
EQUIVALENCE (SIDE,NHISTOUT(1))
EQUIVALENCE (DGY,NCCUE,NHISTOUT(14))
EQUIVALENCE (NTLIST,DGZ,NMDS,NDEI,NMPS,NHISTOUT(15))
EQUIVALENCE (AGA,TAIM,NPEN,NTARG,NHISTOUT(16))
EQUIVALENCE (AGY,NTENM,NCYCLE,NHISTOUT(17))
EQUIVALENCE (AGZ,NAHEA,NSUCC,NHISTOUT(18))
EQUIVALENCE (NCGL,NTST,NHISTOUT(19))
EQUIVALENCE (LAUNLIS,NHISTOUT(43))
EQUIVALENCE (TAHLST,NHISTOUT(63))
EQUIVALENCE (NTHYLC,NHISTOUT(79))
EQUIVALENCE (DGA,NMIV,NAL,NHISTOUT(13))
EQUIVALENCE (INTARC,NDEPEN,NHISTOUT(20))
EQUIVALENCE (THOUR,NHISTOUT(21))
EQUIVALENCE (INZONE,NHISTOUT(14))
EQUIVALENCE (FUTIME,NHISTOUT(22))
EQUIVALENCE (FTIME,NHISTOUT(6))
EQUIVALENCE (INHAWE,NHISTOUT(2))
DIMENSION LAUNLIS(16)
DIMENSION TARLIST(18)
DIMENSION NTHYLC(18)
DIMENSION NTLIST(15)
DIMENSION INTAHC(40)
TYPE INTEGER CLASSMAN,TYPEMAN,SIDEWAD
DIMENSION JPRINT(50)
DIMENSION TX(50),TY(50)
DIMENSION KALT(2)
DATA KALT=5H HIGH,5H LOW)
DATA (KMS24=100000000)
TYPE INTEGER PLACE
EQUIVALENCE (NAPNLST,NHISTOUT(25))
DIMENSION NAPNLST(18)
DIMENSION IRECCV(50,4,2)
LSMIFI=64
NCCNT=0
NOPRINT=1
HEAD 8888, JPRINT
8888 FORMAT(8U1)

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```

      HEAD 6488. ITI=
6888 FORMAT(110)
      IF (ITI*LE..0) 6889,6881J
6881J HEAD 6488*(TX(1)*TY(1))=1,ITI*
6888 FORMAT(2F10.4)
6889 HEAD=J45*CLASS*TYPE*NAME*SIDE*NAME
6885 FORMAT(3A8.2X)
      HEAD 6488,IFUT
      PRINT 14401,ITI*
14401 FORMAT(37H TELLS HISTORY BETWEEN THE FOLLOWING ,18,11H TIME PAIRS)
      GO TO 14406 J=1,ITI*
14402 FORMAT(10,4*7A*F10.4)
14406 CONTINUE
      PRINT 14403, CLASS*NAME
14403 FORMAT(5H FOR 18,10H CLASS(ES))
      PRINT 14404, TYPE*NAME
14404 FORMAT(5H FOR 18,8H TYPE(S))
      PRINT 14405, SIDE*NAME
14405 FORMAT(5H FOR 18,8H SIDE(S))
      MYIDENT=MMHISTP
      IF (IFUT*EQ..1) 9903,9904
9903 PRINT 9905
9905 FORMAT(23H FUTURE WILL BE PRINTED )
9904 CONTINUE
      CALL INITAPE
      IFUT=1
      MYIDENT=MMHISTAPE
      CALL SETHEAD
8888J CALL RDWCND
      IF (ITWCND*EQ..4*LAST) 8888J,2
8888J CALL RDWCND (MMHISTOUT,ITWCND)
6092 IF (ITI*LE..0) 6084,6083
6082 D6083 I=1,ITI*
      IF (TIME*GE..IX(1)) .AND. TIME*LT..TY(1) * .OCU1) 6084, 6083
6083 CONTINUE
      GO TO 4999
6084 JTYPE=MYTYPE*NTYPE*ECUM(KCLASS-1)

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843

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182 J=J+1
183 IF (NMIRV.EQ.1) 183,184
184 PRINT 918,NMPLIST(1),LAUNLIST(1),INBASE,TARLIST(J),FUTIME
9183 FORMAT(2X,8M MISSILE,13,1M-14,10M FROM BASE,16,17M TO ARRIVE AT
16T,16,3M AT,F4.4)
185 GO TO 185
186 PRINT 918,NMPLIST(1),LAUNLIST(1),NMIRV
9184 FORMAT(20X,6M MISSILE,13,1M-14,17M LAUNCHED AGAINST,13,8M TARGETS
1)
185 CONTINUE
187 GO TO 9999
C
NUMBER OR TANKER LAUNCH EVENT
20 GO TO (201,202,203)BCODE
201 IF (JPRINT(6)) 211,9999
211 PRINT 201,TIME,TYPE,INDV,INDEXNO,THCUM
2001 FORMAT(F9.4,4X,40,13,1M-14,17M LAUNCH, TABORT =F8.4)
202 GO TO 9999
202 IF (JPRINT(8)) 222,9999
222 PRINT 202,TIME,TYPE,INDV,INDEXNO
2002 FORMAT(F9.4,4X,40,13,1M-14,22M NO LAUNCH - BASE DEAD)
203 GO TO 9999
203 IF (JPRINT(7)) 233,9999
233 PRINT 203,TIME,TYPE,INDV,INDEXNO,THCUM
2003 FORMAT(F9.4,4X,40,13,1M-14,21M ABORT, NEW LAUNCH AT,F8.4)
204 GO TO 9999
30 NCONT=CONT+1
30 IF (NCONT.GT.7) 33335,33334
33334 PRINT 33333,BCODE
33333 FORMAT(4X,316)
33335 GO TO (31,32) BCODE
31 IF (JPRINT(47)) 311,312
311 PRINT 931,TIME,NAME,TYPE,INDV,INDEXNO,NMIRV
9311 FORMAT(F9.4,4X,40,13,1M-14,9M RELEASES,13,6M MIVS)
312 IF (JPRINT(48)) 313,9999
313 GO TO 314 IF (NMIRV)
314 PRINT 9313,NMPLIST(1)
9313 FORMAT(48X,15)
302 GO TO 9999
32 IF (JPRINT(9)) 321,9999
321 PRINT 932,TIME,NAME,TYPE,INDV,INDEXNO,NMIRV
9321 FORMAT(F9.4,4X,40,13,1M-14,25M DESTROYED IN FLIGHT #1H,13,6M MIV
145,
303 GO TO 312
C
NUMBER REFUEL EVENT
40 IF (BCODE.EQ.1) 401,41
41 IF (BCODE.EQ.4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999)
401 IF (BCODE.EQ.5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999)
4101 PRINT 410,TIME,TYPE,INDV,INDEXNO,PLACE
4104 FORMAT(F9.4,4X,40,13,1M-14,21M REFUEL ABORT IN AREA,13)

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GC TC 911
405 IF(JPRINT(12)) 14 NS.9999
406 PRINT 4195,TIME,TYPE,INDV,INDEXNO,PLACE
4105 FORMAT(F8.4,4X,A8.13,1M-14,19H NO TANKERS IN AREA,13)
410 IF(ACCODE EQ 14) 419,9900
410 RETURN CODE (ACCODE=19 CR20)
C
414 IF(JPRINT(13)) 4019,9900
4019 PRINT 4119
4119 FORMAT(13X,12H RETURN CODE)
GC TC 9900
C
ENTER ZONE EVENT *****
CSUMR HISTPT 150V71 *****
50 IF(ACCODE EQ 61506,507
506 IF(JPRINT(15)) 5009,9999
5006 PRINT 5106,TIME,TYPE,INDV,INDEXNO,PLACE
5106 FORMAT(F8.4,4X,A8.13,1M-14,30H ENTER ENEMY TERRITORY AT ZONE,13)
GC TC 9900
507 IF(JPRINT(16)) 5107,9999
507 PRINT 5107,TIME,TYPE,INDV,INDEXNO,INZONE
5107 FORMAT(F8.4,4X,A8.13,1M-14,32H LEAVE ENEMY TERRITORY FROM ZONE,13)
1)
GC TC 9900
60 IF(JPRINT(17)) 610,9999
610 PRINT 620,TIME,SEID
620 FORMAT(//10X,F8.4,6X,11H STATUS OF 145.6M ZONES//6H ZONE 14,
NSUMS)
1 12H PENETRATORS)
DC 650 14BEG,1END
NSPENZ(1:1-1DEG)
NSUMS=SUM-NSP
630 PRINT 640,1END
640 FORMAT(15,7X,15)
650 FORMAT(76H TOTAL,6X,15//)
PRINT 650,NSUM
GC TC 9999
C
AREA ATTRITION EVENT
70 IF(JPRINT(18)) 7008,9999
7008 PRINT 7108,TIME,TYPE,INDV,INDEXNO,ZONE
7108 FORMAT(F8.4,4X,A8.13,1M-14,23H AREA ATTRITION IN ZONE,13)
GC TC 9999
C
LOCAL ATTRITION EVENT
80 IF(ACCODE EQ 11501,81
81 IF(ACCODE EQ 9189,802
802 IF(ACCODE EQ 10) 8010,808
808 IF(ACCODE EQ 11) 8011,804
804 IF(ACCODE EQ 27) 8017,9999
8017 IF(JPRINT(19)) 8001,9999
8001 PRINT 8101,TIME,TYPE,INDV,INDEXNO,INTAR
8101 FORMAT(F8.4,4X,A8.13,1M-14,20H COMBER SURVIVES 1GT,15)
KS=1
GC TC 82
809 IF(JPRINT(20)) 8009,9999
8009 PRINT 8109,TIME,TYPE,INDV,INDEXNO,INTAR
8109 FORMAT(F8.4,4X,A8.13,1M-14,18H KILLED BEFORE 1GT,15)
GC TC 9999
8010 IF(JPRINT(20)) 8010,9999

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8110 PRINT #210,TIME,TYPE,INDV,INDEXNC,INTAR
8210 FORMAT(8,4,4,X,AB,13,1M-1,4,17H KILLED AFTER TGT,15)
      KS=0
      GC TO 82
8111 IF(JPRINT(221),111,9999
8111 PRINT #211,TIME,TYPE,INDV,INDEXNC,INTAR
8211 FORMAT(8,4,4,X,AB,13,1M-1,4,16H ASM KILL AT TGT,15)
      GC TO 9999
8117 IF(JPRINT(211),1117,9999
8117 PRINT #217,TIME,TYPE,INDV,INDEXNC,INTAR
8217 FORMAT(8,4,4,X,AB,13,1M-1,4,16H ASM PEN. TO TGT,15)
      C
      TEST FOR DUD
      82 IF(INDV.EQ.2) 83,84
      83 IF(JPRINT(231),13,9999
      803 PRINT#C03
      803 FORMAT(30,12H DUD WARHEAD)
      84 IF(KS.EQ.1) 9900,9999
      C
      TERMINAL BALLISTIC MISSILE DEFENSE EVENT
      90 IF(JPRINT(2),1900,9999
      900 PRINT #900,TIME,NAME,TYPE(1),INDV,INDEXNC,INTAR,NAL,NPEN,NDET
      9000 FORMAT(8,4,4,X,AB,13,1M-1,4,
      115H TERMBMD AT TGT,15,17H ALLOC,13,15H INT,13,15H MHUS. PEN. AND,
      11,15H DET.)
      GC TO 9999
      C
      FIRST DAMAGE EVENT
      100 IF(JPRINT(251),101,102
      101 PRINT #,NTYP,06X,06Y,AGX,AGY
      7 FORMAT(5110)
      102 IF(JPRINT(261),103,9999
      103 GC TO 105 1=NCCL
      CODE=INTARC(1)/IRS2*
      INTAR=INTARC(1)-CODE*IRS2*
      GC TO 161,62,63,64,65,66)CODE
      61 PRINT #1, INTAR
      71 FORMAT(10X,7H TARGET,16,9H SURVIVES)
      GC TO 105
      62 PRINT #2,INTAR
      72 FORMAT(10X,7H TARGET,16,12H NON-DYNAMIC)
      GC TO 105
      63 PRINT #3,INTAR
      73 FORMAT(10X,7H TARGET,16,7H KILLED)
      GC TO 105
      64 PRINT #4,INTAR
      74 FORMAT(10X,7H TARGET,16,13H ALREADY DEAD)
      GC TO 105
      65 PRINT #5,INTAR
      75 FORMAT(10X,7H TARGET,16,13H NOT IN COLLAR)
      GC TO 105
      66 PRINT #7
      17 FORMAT(46H ERRCH IN RUAM, CODE LT 1 OR GT 5 CONTINUE RUN)
      GC TO 9999
      105 CONTINUE
      C
      ENTER REFUEL AREA EVENT
      110 IF(JPRINT(281),18,9999
      18 PRINT #9,TIME,TYPE,INDV,INDEXNC,PLACE
      19 FORMAT(8,4,4,X,AB,13,1M-1,4,15H ARRIVE AT AREA,13)

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C
GC TO 9999
LEAVE REFUEL AREA EVENT
120 IF(BCODE.EQ.1121.24
21 IF(JPRINT(29))141.9999
91 PRINT 45.TIME,TYPE,INDV,INDEXNO,ZONE
45 FORMAT(F8.4,X,AB,13,1H-,14,13M DEPARTS AREA,13,5H EMPTY )
GC TO 9999
24 IF(BCODE.EQ.12122.33
22 IF(JPRINT(31))92.9999
92 PRINT 46.TIME,TYPE,INDV,INDEXNO,ZONE
46 FORMAT(F8.4,X,AB,13,1H-,14,14H ABORT IN AREA,13 )
GC TO 9999
33 IF(BCODE.EQ.13123.23
23 IF(JPRINT(30))93.9999
93 PRINT 47.TIME,TYPE,INDV,INDEXNO,ZONE
47 FORMAT(F8.4,X,AB,13,1H-,14,13M DEPARTS AREA,13,5H FULL )
GC TO 9999
C
BOMBER ABORT EVENT
130 IF(BCODE.EQ.141131.131B
1314 IF(JPRINT(33))13014.9999
13014 PRINT 13114.TIME,TYPE,INDV,INDEXNO
13114 FORMAT(F8.4,X,AB,13,1H-,14,13M HANDBOM ABORT)
GC TO 9999
131B IF(JPRINT(32))1301B.9999
1301B PRINT 1311B.TIME,TYPE,INDV,INDEXNO
1311B FORMAT(F8.4,X,AB,13,1H-,14,17H SCHEDULED SPLASH)
GC TO 9999
C
ASM LAUNCH EVENT
140 IF(BCODE.EQ.111401.1415
1401 IF(JPRINT(34))14001.9999
14001 PRINT 14101.TIME,TYPE,INDV,INDEXNO
14101 FORMAT(F8.4,X,AB,13,1H-,14,11H ASM LAUNCH)
GC TO 9999
1415 IF(JPRINT(35))14015.9999
14015 PRINT 14115.TIME,TYPE,INDV,INDEXNO
14115 FORMAT(F8.4,X,AB,13,1H-,14,17H ASM LAUNCH ABORT )
GC TO 9999
C
DECGY LAUNCH EVENT
150 IF(JPRINT(36))15001.9999
15001 PRINT 151.TIME,TYPE,INDV,INDEXNO,PLACE,KALT(J)
1501 FORMAT(F8.4,X,AB,13,1H-,14,7H LAUNCH,13,12H DECGYS FROM,15,9H ALT
11TUDE)
GC TO 9999
C
BOMBER RECOVERY EVENT
160 IF(PLACE ALT. 350) 1630.1631
1630 IR=PLACE/LSHIFT
IDEPEN=PLACE-IR*LSHIFT
PLACE=IRECSV(I*DEPEN,IR*NSIDE)
1631 IF(BCODE.EQ.111601.1604
1601 IF(JPRINT(37))1602.9999
1602 PRINT 1603.TIME,TYPE,INDV,INDEXNO,PLACE
1603 FORMAT(F8.4,X,AB,13,1H-,14,17H RECOVERY AT BASE,15)
GC TO 9999
1604 IF(BCODE.EQ.1711605.1610
1605 IF(JPRINT(38))1606.9999

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144000
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146000
147000
148000
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151000
152000
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154000
155000

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1606 PRINT(607,TIME,TYPE,INDV,INDEXING,PLACE
1607 FORMAT(F8.4,X,13,14,14,14H RECOVERY BASE,15,5H DEAD)
GC TO 9999
1610 IF(RCDE.EQ.21)1611,1620
1611 IF(JPRINT(3))1612,9999
1612 PRINT 9161,TIME,TYPE,INDV,INDEXING
9161 FORMAT(F8.4,X,AB,13,14,14,40H NO LIVE BASE AVAILABLE ON DEPENDANT
LATION)
GC TO 9999
1620 IF(RCDE.EQ.22) 1621,1623
1621 IF(JPRINT(4))1622,9999
1622 PRINT 9162,TIME,TYPE,INDV,INDEXING,PLACE
9162 FORMAT(F8.4,X,AB,13,14,14,14H RECOVERY BASE,15,10H SATURATED)
GC TO 9999
1623 IF(RCDE.EQ.25) 1624,1625
1624 IF(JPRINT(50)) 1602,9999
1625 IF(RCDE.EQ.26) 1626,9999
1626 IF(JPRINT(51)) 1606,9999
C CHANGE ALTITUDE EVENT
170 JPRINT(39)1700,9999
1700 JPRINT(1
PRINT(101,TIME,TYPE,INDV,INDEXING,ALT(J)
1701 FORMAT(F8.4,X,AB,13,14,14,14H CHANGE TO,AS,9H ALTITUDE)
GC TO 9999
C AREA 940 EVENT
180 IF(RCDE.EQ.0)1811,1800
1800 IF(JPRINT(40))181,1814
181 GC TO (1801,1805,1809,RCDE
1801 PRINT 1802,TIME,NAME,TYPE(1),INDV,INDEXING,INTAR
1802 FORMAT(F8.4,X,AB,13,14,14,40H TOT,15,
124H PREV. SELECTED FOR AREA BMD)
GC TO 1814
1805 PRINT 1806,TIME,NAME,TYPE(1),INDV,INDEXING,INTAR
1806 FORMAT(F8.4,X,AB,13,14,14,40H TOT,15,
124H NOT SELECTED FOR AREA BMD)
GC TO 9999
1809 PRINT 1810,TIME,NAME,TYPE(1),INDV,INDEXING,INTAR
1810 FORMAT(F8.4,X,AB,13,14,14,40H TOT,15,
127H NAME SELECTED FOR AREA BMD)
GC TO 1814
1811 IF(JPRINT(42))1812,1814
C OTHERWISE CODE ED ZERO
1812 PRINT 1813,TIME,NAME,TYPE(1),INDV,INDEXING,INTAR
1813 FORMAT(F8.4,X,AB,13,14,14,23H HANDSH AREA BMD AT TOT,15)
GC TO 1814
1814 IF(JPRINT(41))1815,9999
1815 PRINT 1816,NAME,TIME,NAMEUS
1816 FORMAT(11X,10H ALLOCATED,16,10H INTERCEPTORS, AND,16,
113H OBJECTS WITH,16,20H WARHEADS PENETRATED )
GC TO 9999
C CHECK EVENT
190 IF(RCDE.EQ.23) 191,193
191 IF(JPRINT(45)) 192,9999
192 PRINT 9192,TIME,TYPE,INDV,INDEXING,PLACE
9192 FORMAT(F8.4,X,AB,13,14,14,30H KILLED AFTER RECOVERY AT BASE,15)
GC TO 9999

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FTNS.5

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193 IF(MCQDE.EQ.24) 194.9999
194 IF(LJPRINT(40)) 192.9999
200 IF(LJPRINT(52)) 200.9999
206 PRINT 205,TIME,NAME,TYPE(JTYPE),INDASE,FTIME
207 FORMAT(F8.4,6X,6.0X,16.3X) SCHEDULED FOR NAVAL ATTRITION AT TIME
      1.0E-4)
      GC TO 9990
210 IF(LJPRINT(53)) 212.9999
212 PRINT 213,TIME,NAME,TYPE(JTYPE),INDASE
213 FORMAT(F8.4,6X,6.0X,16.3X) NAVAL ATTRITION
      GC TO 9995
9900 IF(IFTM.EQ.1) 9902.1
9902 PRINT 9901,FUTIME
9901 FORMAT(50X,14H NEXT EVENT AT ,F9.4)
      GC TO 9999
9990 GC TO 1
8999H STOP
      END

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212.00
213.00
214.00
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SATS

MISTP

PROGRAM LENGTH
ENTRY POINTS
BLOCK LINES

MISTP

NAMES

TTP

TRASH

NOOP/NT

WINDENT

WRAPPOINT

MISTOUT

EXTERNAL SYMBOLS

PSWENTRY

TRASH

POSTOPS

UNDOICI

INITIAL

SETUP

RTNCHK

BOARDAT

TERMINP

SKIPFILE

TERMTAPE

UNCIFUNI

TSM

BFI

STH

SUI

ONSTL

IDENT

05577

02736

00013

00001

00001

00001

00001

00007

00310

MISTP

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C00020	461	0-506			04-017	04-017	04-013	04-013	04-016
C00021	462				04-017	04-017	04-013	04-013	04-016
C00022	PCODE				04-017	04-017	04-013	04-013	04-016
100016	BEI.	03155			04-017	04-017	04-013	04-013	04-016
P05512	CL5644	03155			04-017	04-017	04-013	04-013	04-016
P05516	DNV11.	03155			04-017	04-017	04-013	04-013	04-016
C00014	D64	04503			04-017	04-017	04-013	04-013	04-016
C00015	667	04503			04-017	04-017	04-013	04-013	04-016
C00016	067	04503			04-017	04-017	04-013	04-013	04-016
P00001	01CT.	04503			04-017	04-017	04-013	04-013	04-016

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HISTO

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P04345	GG00052.	04327					
P04366	GG00053.	04350					
P04410	GG00054.	04372					
P04431	GG00055.	04413					
P04443	GG00056.	04435					
P04472	GG00057.	04450					
P04511	GG00059.	04475					
P04542	GG00061.	04532					
P04553	GG00062.	04543					
P04564	GG00063.	04554					
P04575	GG00064.	04565					
P04606	GG00065.	04576					
P04615	GG00066.	04607					
P04641	GG00067.	04623					
P04664	GG00068.	04644					
P04707	GG00071.	04671					
P04732	GG00072.	04714					
P04754	GG00073.	04737					
P04774	GG00074.	04757					
P05016	GG00075.	05001					
P05036	GG00076.	05021					
P05084	GG00077.	05044					
P05125	GG00078.	05107					
P05150	GG00079.	05132					
P05172	GG00082.	05155					
P05215	GG00083.	05177					
P05252	GG00084.	05223					
P05303	GG00085.	05264					
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P05343	GG00087.	05324					
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P05401	GG00089.	05367					
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C00017	IALT	05490					
C00002	IHEG	05490					
P05550	ICLAS	05490					
P05557	IUEPE	05490					
C00014	IDUN	05490					
C00004	IEND	05490					
P03240	IFU0001.	05490					
P03276	IFU0002.	05490					
P04011	IFU0003.	05490					
P04013	IFU0004.	05490					
P04020	IFU0005.	05490					
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03003	03005	03233	03235	03245	03370	03406	03764
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04204	04207	04210					

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P05404 .19I		
P05406 .192	05405	U5430
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P05427 .194		
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P03611 .2J	03325	
P05431 .20J	03342	
P03615 .20I	03713	
P03636 .202	03014	
P03656 .203	03014	
P05433 .204	05442	
P04644 .21		
P05452 .21J	03343	
P03617 .21I	03010	
P05454 .212	05453	
P04667 .22		
P0364J .222	03037	
P04712 .23	04711	
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P04665 .24	04743	
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P03322 .3	03317	
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P04710 .33	04606	
P03704 .3334	03702	U3702
P03714 .3335	03703	
P04004 .4J	03326	
P04027 .401	04126	
P0405J .4004	04147	
P04071 .4035	0415J	
P04025 .401	04005	U4023
P04114 .4019	04113	
P04045 .404	0401J	U4015
P04067 .405	04017	U4021
P04007 .41	04005	
P04107 .41J	04100	
P04112 .419	04110	
P04016 .42	04014	
P04123 .50	03327	
P04127 .5006	04126	
P04150 .50J7	04147	
P04125 .506		
P04146 .507	04124	
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P03301 .6073	03273	
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P03251	.6094	03231	03231	03244
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P03315	.6087	03314		
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P04264	.80			
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P04327	.8009			
P04303	.801			
P04346	.8010			
P04370	.8011			
P04272	.802			
P04435	.803			
P04300	.804			
P04275	.804			
P04325	.809			
P04267	.81			
P04350	.810			
P04372	.811			
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P04411	.817			
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P03134	.88044			
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P04446	.90			
P04450	.900			
P04640	.91			
P04671	.92			
P04714	.93			
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P03116	.9903											
P03124	.9904											
P05504	.9999											
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P01207	..100001	03703	04326	04345	04347	04371	04410	04412	04434	04444	04447	04472
P01210	..100002	04304	04620	04622	04641	04645	04646	04670	04713	04713	04732	04736
P01221	..100003	04512	04754	04774	05000	05020	05040	05106	05125	05131	05150	05154
P01222	..100004	05112	05176	05215	05221	05223	05225	05227	05227	05306	05401	05405
P01223	..100005	05112	05424	05430	05432	05451	05453	05471				
P01224	..100006	03112										
P01225	..100007	03113										
P01366	..100008	03113										
P01367	..100009	03113										
P01370	..100010	03240										
P01371	..100011	03322										
P02312	..13114	04742										
P02325	..13118	04702										
P02343	..14101	05044										
P02357	..14115	05244										
P01131	..14401	03444										
P01145	..14402	03452										
P01152	..14403	03406										
P01162	..14404	03475										
P01171	..14405	03105										
P02374	..1501	05147										
P02417	..1603	05112										
P02435	..1607	05135										
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CU0014 NAL	04405	05373					
CU0012 NAMECLAS	03267	03270					
CU0009 NAMEESIDE	03202	03265	03356	03731	03731	03773	04457
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CU0017 NAMEUPT							
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CU0015 MCCOE	03710	03714	03714				
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CU0016 MCYCLE	03505	03511	03511	03606	03606		
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PO5576 NSUM	04203	04214	04215				
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P05510	SLIDE	03106	03274	03276	03301	03305
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X00020	SLI.					
X00017	SLI.					
C00017	TAI4	03050	03064	03073	03103	03117
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C00024	THQUA	03054	03073	04051	04072	04115
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P03246	TS00003.	03054	03073	04051	04072	04115
P03305	TS00004.	03054	03073	04051	04072	04115
P03606	TS00005.	03054	03073	04051	04072	04115
P03757	TS00006.	03054	03073	04051	04072	04115
P04230	TS00007.	03054	03073	04051	04072	04115
P04616	TS00010.	03054	03073	04051	04072	04115
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P00205	TY	03054	03073	04051	04072	04115
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P05521	UP00006.	03054	03073	04051	04072	04115
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P03002	WS00001.	03054	03073	04051	04072	04115
P03067	WS00002.	03054	03073	04051	04072	04115
P03234	WS00003.	03054	03073	04051	04072	04115
P03370	WS00004.	03054	03073	04051	04072	04115
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04734 04727